



LIST OF STUDENTS UNDERTAKING PROJECT WORK/INTERNSHIP/FIELD WORK

THE ACADEMIC YEAR 2023-24.

I B.PHARMACY

S.No.	REG.No.	NAME OF THE CANDIDATE	YEAR	PROJECT	INTERNSHIP	FIELD WORK
1	233G1R0001	ABU SAHAMA	I	X	X	✓
2	233G1R0002	AINAPARTHI SYVALINI	I	X	X	✓
3	233G1R0003	ALLI SRI JECHARIKA	I	X	X	✓
4	233G1R0004	ANKEM GEETHA VENKATA LAKSHMI	I	X	X	✓
5	233G1R0005	ATRI SARBADHIKARY	I	X	X	✓
6	233G1R0006	AVINASH PRASAD	I	X	X	✓
7	233G1R0007	AYENAMPUDI SRI PRANEETHA	I	X	X	✓
8	233G1R0008	BALOYI BONGANI B	I	X	X	✓
9	233G1R0009	BANDI VENKATA LAKSHMI	I	X	X	✓
10	233G1R0010	BATCHU DEVI SRI CHANDANA	I	X	X	✓
11	233G1R0011	BEJAWADA SIVA DURGA	I	X	X	✓
12	233G1R0012	BISABATHINA SUJITH	I	X	X	✓
13	233G1R0013	BODA NAGA MOHINI	I	X	X	✓
14	233G1R0014	BOGIMAYUM IMTIAS	I	X	X	X
15	233G1R0015	BONTHU ROHINI	I	X	X	✓
16	233G1R0016	BONTHU SRIVIDYA	I	X	X	✓

17	233G1R0017	CHAKANDINAKARA PRIMROSE T	I	X	X	✓
18	233G1R0018	CHALLA NAGA HARSHIKA	I	X	X	✓
19	233G1R0019	CHIKILE STEEVENSON	I	X	X	✓
20	233G1R0020	CHIKUKU PERPETUAL R	I	X	X	✓
21	233G1R0021	CHINNARI DHANUSHA	I	X	X	✓
22	233G1R0022	CHINTAPALLI MANIKANTA	I	X	X	✓
23	233G1R0023	CHIPPADA JYOTHI	I	X	X	✓
24	233G1R0024	CHOPPELLA SUSHMITHA	I	X	X	✓
25	233G1R0025	DANDUPROLU CHARMILA	I	X	X	✓
26	233G1R0026	DEBAYAN GUHARROY	I	X	X	✓
27	233G1R0027	DESABATHULA ANUSHA	I	X	X	✓
28	233G1R0028	DURGAPU MEENA LAKSHMI VASAVYA	I	X	X	✓
29	233G1R0029	GANDHAM ARADHANA PRIYANKA	I	X	X	✓
30	233G1R0030	GATIGANTI VEERA VENKATA MANI SRIJA	I	X	X	X
31	233G1R0031	GOLLA KEERTHANA	I	X	X	✓
32	233G1R0032	GOURAB DAS	I	X	X	✓
33	233G1R0033	GUBBALA LAVANYA	I	X	X	✓
34	233G1R0034	GUBBALA SRI LALITHA	I	X	X	✓
35	233G1R0035	GUTU TAFADZWA H	I	X	X	✓
36	233G1R0036	JAGGAMPUDI AYYAPPA	I	X	X	✓
37	233G1R0037	JAKKA SATYA SRIDEVI	I	X	X	✓
38	233G1R0038	JALLI BHEEMESH	I	X	X	✓
39	233G1R0039	KAKARA ANGEL	I	X	X	✓
40	233G1R0040	KANDEMIVIRI SHAMMAH R	I	X	X	✓
41	233G1R0041	KAPA YASWANTH DURGA MUKESH	I	X	X	✓
42	233G1R0042	KARRI HARIKA	I	X	X	✓

43	233G1R0043	KATNAM SUMA	I	X	X	✓
44	233G1R0044	KONDAPALLI JYOTHIKA	I	X	X	✓
45	233G1R0045	KOPPIREDDY HARIKA SATYA NANDHINI	I	X	X	✓
46	233G1R0046	KORRA MURALI MOHAN NAYAK	I	X	X	✓
47	233G1R0047	KORUPURI DURGA KRISHNA VASAVI	I	X	X	✓
48	233G1R0048	KURUPUDI VENKATA NAGA LAKSHMI	I	X	X	✓
49	233G1R0049	LODI SAFIYA	I	X	X	✓
50	233G1R0050	MADINE SATYA ANANTHA LAKSHMI	I	X	X	✓
51	233G1R0051	MALLA BHAGYA SRI SAI	I	X	X	✓
52	233G1R0052	MANDALA VENKATA DIVYA LOVA NAGALAKSHMI	I	X	X	✓
53	233G1R0053	MANUPATI VENKATALAKSHMI	I	X	X	X
54	233G1R0054	MARISSETTY POOJITHA	I	X	X	✓
55	233G1R0055	MD KAIF AKHTAR	I	X	X	✓
56	233G1R0056	MOICHING MAYUM MUSTAK	I	X	X	X
57	233G1R0057	MONDEM LOVA BHUVANESWARI	I	X	X	✓
58	233G1R0058	MORI JNANA PRASANNA	I	X	X	✓
59	233G1R0059	MOYO ALLAN A	I	X	X	✓
60	233G1R0060	MUNURU JYOTHSNA	I	X	X	✓
61	233G1R0061	MUSKAN BANJARE	I	X	X	✓
62	233G1R0062	HEMMISH MWAIMBODEYI	I	X	X	✓
63	233G1R0063	NAGIREDDY VARALAKSHMI	I	X	X	✓
64	233G1R0064	NANIPALLI KUSUMA DEVI	I	X	X	✓
65	233G1R0065	PAILA POOJITHA	I	X	X	✓
66	233G1R0066	PANNALA NAGA SURYA VISHNU VASANTA	I	X	X	✓
67	233G1R0067	PANTHAGADI SUNITHA	I	X	X	X

68	233G1R0068	PENAGANTI VYSHNAVI	I	X	X	✓
69	233G1R0069	PENTAPATI SRI MAHALAKSHMI	I	X	X	✓
70	233G1R0070	PIRLA SUJINI	I	X	X	✓
71	233G1R0071	POTELA HEMA	I	X	X	✓
72	233G1R0072	PRAGADAREDDY RANI	I	X	X	✓
73	233G1R0073	RAUSHAN KUMAR SHAH	I	X	X	✓
74	233G1R0074	RIMMALAPUDI POOJA SHREE	I	X	X	✓
75	233G1R0075	ROUTHU KEERTHANA	I	X	X	✓
76	233G1R0076	RUFANA	I	X	X	✓
77	233G1R0077	RUPAK ACHARYA	I	X	X	✓
78	233G1R0078	SAMRAT DEY	I	X	X	✓
79	233G1R0079	SANA PRASANTHI KUMARI	I	X	X	✓
80	233G1R0080	SANNI KUMAR	I	X	X	✓
81	233G1R0081	SANTANU MAHAPATRA	I	X	X	✓
82	233G1R0082	SARIKA MOHANA SRI HARSHA	I	X	X	✓
83	233G1R0083	SATYAM KUMAR	I	X	X	✓
84	233G1R0084	SCOTCH ADMIRE M	I	X	X	✓
85	233G1R0085	SIDDHARTH NARAYAN	I	X	X	✓
86	233G1R0086	SINGAMPALLI L V S PRAVALLIKA	I	X	X	✓
87	233G1R0087	SINGILIDEVI KHYATHI SREE	I	X	X	✓
88	233G1R0088	SIRAPURAPU DURGA MANJULA	I	X	X	✓
89	233G1R0089	SOHAIL ANSARI	I	X	X	✓
90	233G1R0090	SOUMYADIP BEBARTTA	I	X	X	✓
91	233G1R0091	SUBHAJIT NANDA	I	X	X	✓
92	233G1R0092	SUDIP BARMAN	I	X	X	✓
93	233G1R0093	SUMIT MAL	I	X	X	✓
94	233G1R0094	SUNITI DWIBEDI	I	X	X	✓

95	233G1R0095	SWARNAB PRADHAN	I	X	X	✓
96	233G1R0096	TANARAPU JOTSNA	I	X	X	✓
97	233G1R0097	TANUKU YAMINI SATYA PRIYA	I	X	X	✓
98	233G1R0098	TIZIRA KARREN E	I	X	X	✓
99	233G1R0099	TOTAN PAL	I	X	X	✓
100	233G1R00A0	VADDI VENKATA DURGA RAMA LAKSHMI	I	X	X	✓
101	233G1R00A1	VADDIPARTHI VENU SAI SUVARNA LAKSHMI	I	X	X	✓
102	233G1R00A2	VARDHINEEDI YAMINI GANGA	I	X	X	✓
103	233G1R00A3	VEMAGIRI SANJANA	I	X	X	✓
104	233G1R00A4	VEMU BALA THAMBI RAJU	I	X	X	✓
105	233G1R00A5	VENTURI SHANMUKHA PRIYA	I	X	X	✓
106	233G1R00A6	VIMBAI TENDAI MACHACHAVANGWA	I	X	X	✓
107	233G1R00A7	POTNURU PREETHI	I	X	X	✓



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THE ACADEMIC YEAR 2023-24.

II B.PHARMACY

S.No	REG.No.	NAME OF THE CANDIDATE	YEAR	PROJECT	INTERNSHIP	FIELD WORK
1	223G1R0001	ABHISHEK KUMAR SINGH	II	X	X	✓
2	223G1R0002	ALNAIM MOHAMMED ALHASSAN ALNAIM	II	X	X	X
3	223G1R0003	AMBATI JAHA NAVI KEERTHI	II	X	X	✓
4	223G1R0004	ANAPARTHI MOURYA SARAN RAJA	II	X	X	✓
5	223G1R0005	ANSHU MISHRA	II	X	X	✓
6	223G1R0006	ASTHA SINGH	II	X	X	✓
7	223G1R0007	ATANU BAG	II	X	X	✓
8	223G1R0008	BACHALA DIVYA PRASANNA	II	X	X	✓
9	223G1R0009	BALUSU V S S RADHIKA KIRANMAYEE CHOWDARY	II	X	X	✓
10	223G1R0010	BANDARU SATYA SAI MALLESWARI	II	X	X	✓
11	223G1R0011	BATTULA SUNI SRI	II	X	X	✓
12	223G1R0012	BODDA YASASWINI	II	X	X	✓
13	223G1R0013	BOKKA NOHITHA SATYA	II	X	X	✓
14	223G1R0014	CHALLAPALLI VENKATA PAVAN	II	X	X	✓
15	223G1R0015	CHAPPIDI YESSICA	II	X	X	✓

		BERNICE ANTHONY				
16	223G1R0016	CHEVVAKULA SAI NAVYA SRI	II	X	X	✓
17	223G1R0017	CHITTOJI SUBHA SRI	II	X	X	✓
18	223G1R0018	DANDU DEEKSHITHA	II	X	X	✓
19	223G1R0019	DARA RUSHITHA	II	X	X	✓
20	223G1R0020	DASARI SIVA LALITHA	II	X	X	✓
21	223G1R0021	DEBESH ROY	II	X	X	✓
22	223G1R0022	DEEKSHA SINHA	II	X	X	✓
23	223G1R0023	DIVVALA ABHINAV VARMA	II	X	X	✓
24	223G1R0024	GIDUTHURI CHAITANYA	II	X	X	✓
25	223G1R0025	GOBINDO GHORAI	II	X	X	✓
26	223G1R0026	GOMPA LALITHADEVI	II	X	X	✓
27	223G1R0027	GONTINA NAVYALATHA	II	X	X	✓
28	223G1R0028	GOURAV DUTTA	II	X	X	✓
29	223G1R0029	GUTHALA PRAMEELA	II	X	X	✓
30	223G1R0030	HITESH GUTHULA	II	X	X	✓
31	223G1R0031	HUSSAM IBRAHIM ABDUL AZIZ TAHA	II	X	X	X
32	223G1R0032	JUVVALA KASI ANNAPURNA	II	X	X	✓
33	223G1R0033	KAMIREDDI LAVANYA	II	X	X	✓
34	223G1R0034	KANCHI DEVI	II	X	X	✓
35	223G1R0035	KANCHUSTAMBAM SATYA MEHAR LAVANYA	II	X	X	✓
36	223G1R0036	KANDIERO KUDZAI	II	X	X	✓
37	223G1R0037	KANKATALA SAI DURGA	II	X	X	✓
38	223G1R0038	KAPPA VENKATA SRIKANTH RAJU	II	X	X	✓
39	223G1R0039	KAPPALA DIVYA	II	X	X	✓
40	223G1R0040	KARE PUJITHA	II	X	X	✓
41	223G1R0041	KARMOKAR SHEELA	II	X	X	✓
42	223G1R0042	KARRI BHIMESWARI BHAVANI	II	X	X	✓
43	223G1R0043	KARRI VASANTHI GANGA	II	X	X	✓
44	223G1R0044	KODU BHARATHKUMAR	II	X	X	✓

45	223G1R0045	KOLLAPU NIKESH VARMA	II	X	X	✓
46	223G1R0046	KOLLIMALLA VAISHNAVI	II	X	X	✓
47	223G1R0047	KOMMULA LAKSHMI NAGA SRI SAI DHARANI DEVI	II	X	X	✓
48	223G1R0048	KONDEPUDI SANTHOSH	II	X	X	✓
49	223G1R0049	KOPPIREDDY DATTAKUMARI	II	X	X	✓
50	223G1R0050	KOPPISETTI HEMA SURYA LAKSHMI	II	X	X	✓
51	223G1R0051	KORUMILLI JAYA DURGA KARTHIKEYA	II	X	X	✓
52	223G1R0052	KOTTAKOTA SRI RANGANADHAM	II	X	X	✓
53	223G1R0053	KOTTAPALLI PRASANNA	II	X	X	✓
54	223G1R0054	KOVVURI MYDHILY TRIDEVI	II	X	X	✓
55	223G1R0055	KUDA LOKESH KUMAR	II	X	X	✓
56	223G1R0056	KUDUPUDI BHARGAVI SOWMYA	II	X	X	✓
57	223G1R0057	KUKKA UMA NAGA SURYA VENKAT	II	X	X	✓
58	223G1R0058	KUSUMANCHI HARSHA VARDHINI	II	X	X	✓
59	223G1R0059	MADDIPATI SRI SAI ADITYA	II	X	X	✓
60	223G1R0060	MAMIDIPALLI PHANI HARSHITHA	II	X	X	✓
61	223G1R0061	MATTA VENKATA BHAVANI PRASAD	II	X	X	✓
62	223G1R0062	MEDAPATI ABHINAYA SAI	II	X	X	✓
63	223G1R0063	MEDIDI VIJAYALAKSHMI	II	X	X	✓
64	223G1R0064	MHISHI KELLY RUTENDO	II	X	X	✓
65	223G1R0065	MOMISA ROY	II	X	X	X
66	223G1R0066	MUTAPE CHANTELLE L	II	X	X	✓
67	223G1R0067	MUZANEMBI PRIDE TAKUDZWA	II	X	X	✓
68	223G1R0068	NADADHURU SRI SUSMITHA	II	X	X	✓
69	223G1R0069	NAGIREDDY GAYATRI SATYA DEVI	II	X	X	✓

70	223G1R0070	NALLAMILLI HARIKA SATYA SRI CHANDANA	II	X	X	✓
71	223G1R0071	NANDIPATI BHAVYASRI	II	X	X	✓
72	223G1R0072	NDACHENGEDZWA SUHAILAH FAITH	II	X	X	✓
73	223G1R0073	NHIRA ASHLEY NATSAI	II	X	X	✓
74	223G1R0074	NISHA KUMARI	II	X	X	✓
75	223G1R0075	NUNNA ISWARYA	II	X	X	✓
76	223G1R0076	OM MUKHERJEE	II	X	X	✓
77	223G1R0077	PABITRA JANA	II	X	X	✓
78	223G1R0078	PALADUGULA LAKSHMI BHAVISHYA	II	X	X	✓
79	223G1R0079	PANDI YASWANTH KUMAR	II	X	X	✓
80	223G1R0080	PEELA DINESH	II	X	X	✓
81	223G1R0081	PERUMALLA ADI LAKSHMI DURGA	II	X	X	✓
82	223G1R0082	PITTA CHANDINI	II	X	X	✓
83	223G1R0083	POLEPALLI VEERA MADHURI	II	X	X	✓
84	223G1R0084	PRATIM MAHAKUL	II	X	X	✓
85	223G1R0085	PRATYUSH KUMAR	II	X	X	✓
86	223G1R0086	PUTHIKA PRIYA JASMIN	II	X	X	✓
87	223G1R0087	RAJANA SARAYU PALLAVI	II	X	X	✓
88	223G1R0088	RAMANUJAM PAVANI	II	X	X	✓
89	223G1R0089	RAMOJU MARYCHANDINI	II	X	X	✓
90	223G1R0090	REHAN FAZAL	II	X	X	✓
91	223G1R0091	RITIK KUMAR	II	X	X	✓
92	223G1R0092	SABBELLA SATWIKA REDDY	II	X	X	✓
93	223G1R0093	SADHANALA SATYA PADMAJA	II	X	X	✓
94	223G1R0094	SADHU RAKESH KUMAR	II	X	X	✓
95	223G1R0095	SANNAPU AKHILA	II	X	X	✓
96	223G1R0096	SARAKULA KEERTHI	II	X	X	✓
97	223G1R0097	SARAMPATI VISHNU	II	X	X	✓

		SURYAKALA				
98	223G1R0098	SAVARA PRAVEEN KUMAR	II	X	X	✓
99	223G1R0099	SAYYAD RAHIMUNNISA	II	X	X	✓
100	223G1R00A0	SHAHZADA AFAQ	II	X	X	✓
101	223G1R00A1	SHAIK AYESHA	II	X	X	✓
102	223G1R00A2	SHAIK HUSUNA	II	X	X	✓
103	223G1R00A3	SHAIK MUNNAPH	II	X	X	✓
104	223G1R00A4	SOUMAJIT BERA	II	X	X	✓
105	223G1R00A5	SOUMIK JANA	II	X	X	✓
106	223G1R00A6	SRI SUSRITHA DUNNA	II	X	X	✓
107	223G1R00A7	SUBHASIS GHOSH	II	X	X	✓
108	223G1R00A8	TEKI SWATHI REVATHI NAGA LAKSHMI	II	X	X	✓
109	223G1R00A9	TELAGAREDDI SRIVALLI	II	X	X	✓
110	223G1R00B0	TELLAM VARSHINI	II	X	X	✓
111	223G1R00B1	UTLAGARI SHARATH KUMAR	II	X	X	✓
112	223G1R00B2	VARRI AMBICA TARUNI	II	X	X	✓
113	223G1R00B3	VENNAPU BLESSYSRI	II	X	X	✓
114	223G1R00B4	YARRA PALLAVI	II	X	X	✓
115	223G1R00B5	YEGI SIRISHA	II	X	X	✓
116	223G1R00B6	YERRAMSETTI GOWTHAM SAI KUMAR	II	X	X	✓
117	223G1R00B7	CHAGANTI BALA ABHINAYA	II	X	X	✓
118	233G5R0001	CHELLE AMRUTHA HEPSIBABAI	II	X	X	✓
119	233G5R0002	KANAKALA SRIDEVI	II	X	X	✓
120	233G5R0003	KARRI GEETHA DEEPIKA	II	X	X	✓
121	233G5R0004	PATTAN AHAMMADUNNISA	II	X	X	✓
122	233G5R0005	TANAKALA SAMPATH	II	X	X	✓



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THE ACADEMIC YEAR 2023-24.

III B.PHARMACY

S.No.	REG.No.	NAME OF THE CANDIDATE	YEAR	PROJECT	INTERNSHIP	FIELD WORK
1	213G1R0001	ADDALA MAHESH	III	X	X	✓
2	213G1R0002	AKULA NEELA VENKATA SAI SANDHYA	III	X	X	✓
3	213G1R0003	AMBATI BHAVYA SAI SRI	III	X	X	✓
4	213G1R0004	AMBATI CHAKRA JYOTHI	III	X	X	✓
5	213G1R0006	BANDISURI SAHEEDA BEGAM	III	X	X	✓
6	213G1R0007	BEEDAM ASHA	III	X	X	✓
7	213G1R0008	BONDU MOTHER THERESSA	III	X	X	✓
8	213G1R0009	CHIKATI BALAJI	III	X	X	✓
9	213G1R0010	CHINNI VEERA VENKATA MALLESWARI	III	X	X	✓
10	213G1R0011	CHINTA ALEKHYA	III	X	X	✓
11	213G1R0012	CHINTA JAYA SIVA SWAROOP	III	X	X	✓
12	213G1R0013	CHIRRA MARGREAT HELEENA	III	X	X	✓
13	213G1R0014	CHITNEEDI LAKSHMI GEETHIKA	III	X	X	✓
14	213G1R0015	CHUNDURI HARSHINI	III	X	X	✓
15	213G1R0016	DODDA LIKHITHA	III	X	X	✓
16	213G1R0017	DOKKADI KEERTHANA	III	X	X	✓

		SRUJANI				
17	213G1R0018	GADA VANDANA	III	X	X	✓
18	213G1R0019	GAMIDI SAI TEJASWINI	III	X	X	✓
19	213G1R0020	GEDELA AJAY SAI	III	X	X	✓
20	213G1R0021	GOLLAPALLI CHANDRA SHEKHAR	III	X	X	✓
21	213G1R0022	GOMPA SANDHYA	III	X	X	✓
22	213G1R0023	GOPA MEENAKSHI	III	X	X	✓
23	213G1R0024	GUTTULA BHUVANESWARI	III	X	X	✓
24	213G1R0025	JALAGADUGULA JAYASREE	III	X	X	✓
25	213G1R0026	KADALI SWATHI	III	X	X	✓
26	213G1R0027	KARRI PAVANI SRIVIDYA	III	X	X	✓
27	213G1R0028	KASA SHANMUKHA	III	X	X	✓
28	213G1R0029	KINTHADA TEJASWINI	III	X	X	✓
29	213G1R0030	KONDAPALLI VISHNU MANISANKAR ANJALI KUMAR	III	X	X	✓
30	213G1R0031	KORAMATI HANSIKA	III	X	X	✓
31	213G1R0032	KORAMATI HARIKA	III	X	X	✓
32	213G1R0033	KOTA HEPSIBA	III	X	X	✓
33	213G1R0034	MADAVARAPU RAMA LAKSHMI	III	X	X	✓
34	213G1R0035	MADDALA HARI CHANDANA SRI LAVANYA	III	X	X	✓
35	213G1R0036	MADDURI SIVAMANI	III	X	X	✓
36	213G1R0037	MAKIREDDI RAJESWARI	III	X	X	✓
37	213G1R0038	MANCHALA PHANI SRI HARSHITA	III	X	X	✓
38	213G1R0039	NIKHIL JILLELLA	III	X	X	✓
39	213G1R0040	PALA SATYANARAYANA RAJU	III	X	X	✓
40	213G1R0041	ALLAKA CHANDINI	III	X	X	✓
41	213G1R0042	ANATHBANDHU DE	III	X	X	✓
42	213G1R0043	ANKUR ACHERJEE	III	X	X	✓
43	213G1R0044	BINOY DAS	III	X	X	✓
44	213G1R0045	BIRESWAR DHABAL	III	X	X	✓
45	213G1R0046	BUGATA SURYA BHAVYESH	III	X	X	✓
46	213G1R0047	GUTHULA HARITHA	III	X	X	✓

47	213G1R0048	HITESH RAJ MANDAL	III	X	X	✓
48	213G1R0049	KARRI LAKSHMI KSHEERAJA	III	X	X	✓
49	213G1R0050	MAYANK MISHRA	III	X	X	✓
50	213G1R0051	PAMPANA SNEHALATHA	III	X	X	✓
51	213G1R0052	PITHANI MONIKA	III	X	X	✓
52	213G1R0053	PONNADA SUPRIYA	III	X	X	✓
53	213G1R0054	PUDI HEMANTH KUMAR	III	X	X	✓
54	213G1R0055	PUTTA SAI SOWMYA	III	X	X	✓
55	213G1R0056	R V ROHAN REDDY CHINTAPALLI	III	X	X	✓
56	213G1R0057	RELANGI LALI MUTYA NANDINI	III	X	X	✓
57	213G1R0058	SALADI VENKATA MARUTHI NAGA SATYA RAVI	III	X	X	✓
58	213G1R0059	SAMPATIRAO YASWANTH	III	X	X	X
59	213G1R0060	SEELAM SIVAMANI	III	X	X	✓
60	213G1R0061	SHAIK FAISAL IQBAL	III	X	X	✓
61	213G1R0062	SIRAM SRIYA AKANKSHA	III	X	X	✓
62	213G1R0063	SRIPADAM KAVYA SRI	III	X	X	✓
63	213G1R0064	SUPRIYA KAKI	III	X	X	✓
64	213G1R0065	SURNI SIRISHA	III	X	X	✓
65	213G1R0066	TETALA SRI AMRUTHA VARSHINI	III	X	X	✓
66	213G1R0067	TETALI PRASANNA	III	X	X	✓
67	213G1R0068	THIRNATI J S R VIJAYADURGA NAGALAKSHMI	III	X	X	✓
68	213G1R0069	BHOGIREDDI SRI NAGA VENKATA PRATYUSHA	III	X	X	✓
69	213G1R0070	DENDUKURI DURGA PRASAD RAJU	III	X	X	✓
70	213G1R0071	DHARANALAKOTA SATYA SYAMALA SRIJA	III	X	X	✓
71	213G1R0072	EDUBILLI GUNAVANTH	III	X	X	✓
72	213G1R0073	KOLA GEETHIKA SRI DEVI ISWARYA	III	X	X	✓
73	213G1R0074	SATHI SUDEEPA REDDY	III	X	X	✓

74	213G1R0075	YANAMADALA PRANEETHA	III	X	X	✓
75	213G1R0076	BERAKA SUCHITRA	III	X	X	✓
76	213G1R0077	MALLIPATI SUMITRA	III	X	X	✓
77	213G1R0078	NARENDRAVARAPU PHANI SAI RAM	III	X	X	✓
78	213G1R0079	RAJANA NAMITHA DURGA SAI	III	X	X	✓
79	213G1R0080	ROUTHU SAI KUMAR	III	X	X	✓
80	213G1R0081	SINGAMPALLI SAI MOUNIKA	III	X	X	✓
81	213G1R0082	ULLI LIKHITHA SATISH	III	X	X	✓
82	213G1R0083	VEERNALA HARINI TEJA SRI	III	X	X	✓
83	213G1R0084	KOUSHIK SASMAL	III	X	X	✓
84	213G1R0085	MEGHANA ENIMIREDDY	III	X	X	✓
85	213G1R0086	PREM KUMAR	III	X	X	✓
86	213G1R0087	SALADI JAHNAVI NAGA CHAMANTHA	III	X	X	✓
87	213G1R0088	SANJOY KUNDU	III	X	X	✓
88	213G1R0089	SATHI RUPA SRI SAI MAHA LAKSHMI	III	X	X	✓
89	213G1R0090	SHAIK BASHEERUNNISA	III	X	X	✓
90	213G1R0091	SHIVANI KUMARI	III	X	X	✓
91	213G1R0092	SUBHA SABDAKAR	III	X	X	✓
92	213G1R0093	SUBHAM MONDAL	III	X	X	✓
93	213G1R0094	SUBHAMOY TEWARY	III	X	X	✓
94	213G1R0095	SUVVANA DEVI	III	X	X	✓
95	213G1R0096	GOPI NAGA SAI SANDEEP	III	X	X	✓
96	213G1R0097	PATHIKA HARITHA	III	X	X	✓
97	213G1R0098	VISWANADUNI UDAY	III	X	X	✓



LIST OF STUDENTS UNDERTAKING PROJECT WORK/INTERNSHIP/FIELD WORK

THE ACADEMIC YEAR 2023-24.

IV B.PHARMACY

S.No.	REG.No.	NAME OF THE CANDIDATE	YEAR	PROJECT	INTERNSHIP	FIELD WORK
1	203G1R0001	AAVALA DEEPIKA	IV	✓	✓	✓
2	203G1R0002	ADAPA VIJAY KUMAR	IV	✓	✓	✓
3	203G1R0003	ADHIKARI VARSHA ANUPAMA	IV	✓	✓	✓
4	203G1R0004	ALLIMPALLI MADHURI DEVI	IV	✓	✓	✓
5	203G1R0005	ALLU KESAVARDHINI	IV	✓	X	✓
6	203G1R0006	ANIMIREDDI JYOTHI VARAPRASAD	IV	✓	✓	✓
7	203G1R0007	ANISETTI MANIKANTA	IV	✓	X	✓
8	203G1R0008	ANNE SAI SREENIVAS	IV	✓	X	✓
9	203G1R0009	BANDARU SAI DURGA	IV	✓	✓	✓
10	203G1R0010	BODDU SAI SRI VANDANA	IV	✓	X	✓
11	203G1R0011	BOJJA VASANTHA	IV	✓	✓	✓
12	203G1R0012	BORRA VIGNITA	IV	✓	✓	✓
13	203G1R0013	CHAKKA DIMPULE SRI CHANDRIKA	IV	✓	X	✓
14	203G1R0015	CHERUVUPALLI SREENU	IV	✓	X	✓
15	203G1R0016	CHINTHA GAYATHRI MANISHA	IV	✓	X	✓
16	203G1R0017	CHITRADA SATISH	IV	✓	X	✓

17	203G1R0018	CHITTIBOMMA SIVA NANDHINI	IV	✓	X	✓
18	203G1R0019	CHOLLA VAMSI VIKRAM	IV	✓	X	✓
19	203G1R0020	DANDUPROLU SANDYA	IV	✓	✓	✓
20	203G1R0021	DATLA CHANDANA SRI	IV	✓	✓	✓
21	203G1R0022	DEYYALA LAXMAN	IV	✓	✓	✓
22	203G1R0023	GAMIDI SRAVYA	IV	✓	X	✓
23	203G1R0024	GEESALA AMUKTHA	IV	✓	✓	✓
24	203G1R0025	GRANDHI LAKSHMI VAISHNAVI	IV	✓	X	✓
25	203G1R0026	GUBBALA KEERTHI	IV	✓	X	✓
26	203G1R0027	GUBBALA RUTH CHANDRIKA	IV	✓	X	✓
27	203G1R0028	GUNNAM SARANYA	IV	✓	X	✓
28	203G1R0029	GURUBILLI SIVAKUMAR	IV	✓	X	✓
29	203G1R0030	IMMIDISETTI TEJASWINI	IV	✓	X	✓
30	203G1R0031	INAKOTI SONIYA SANTI	IV	✓	X	✓
31	203G1R0032	KEDARISETTY MEGHANA KAVYA	IV	✓	✓	✓
32	203G1R0033	KAKI MEGHANA	IV	✓	✓	✓
33	203G1R0034	KALADI DEEPIKA	IV	✓	X	✓
34	203G1R0035	KALADI SATYA SRI	IV	✓	X	✓
35	203G1R0036	KANDULA D VEERA VENKATA LAXMI SURENDRA	IV	✓	X	✓
36	203G1R0037	KANDULA PRAVEEN	IV	✓	X	✓
37	203G1R0038	KARRI PAVANI SRI SAI ANVITHA	IV	✓	X	✓
38	203G1R0039	KEDARISETTI NAGA SAI SATYAKUMARI	IV	✓	X	✓
39	203G1R0040	KETIREDDI NAGA VENKATA SRI LAKSHMI MOHITI	IV	✓	X	✓
40	203G1R0041	KILLI NEELIMA	IV	✓	✓	✓
41	203G1R0042	KOSANAM SIVAGANGA	IV	✓	X	✓
42	203G1R0043	MANE BOOMICA	IV	✓	X	✓
43	203G1R0044	MATCHA SAILAJA	IV	✓	✓	✓
44	203G1R0045	MOHAMMAD ABDUL RAHIM	IV	✓	X	✓
45	203G1R0046	MOHAMMED YUSUF	IV	✓	X	✓
46	203G1R0047	MORTHA BESODYAN	IV	✓	X	✓

		SATYAM				
47	203G1R0048	NALLAMELLI ANITHA	IV	✓	X	✓
48	203G1R0049	NAMBALLA BHARGAVI	IV	✓	X	✓
49	203G1R0050	OBILSETTI GOWRI APARNA RAJESWARI	IV	✓	✓	✓
50	203G1R0051	PALAPARTHI VEERA GANI LAKSHMI	IV	✓	✓	✓
51	203G1R0052	POTTIKA HEMAVATHI	IV	✓	X	✓
52	203G1R0053	RANGANADHAM MOUNIKA	IV	✓	✓	✓
53	203G1R0054	SALADI SAI SRIRAM	IV	✓	✓	✓
54	203G1R0055	SEELA PRADEEP	IV	✓	X	✓
55	203G1R0056	SEELAM LEELAVATHI	IV	✓	X	✓
56	203G1R0057	SETTI AMRUTHA SRI	IV	✓	✓	✓
57	203G1R0058	SIDDABATTULA SRAVANTHI	IV	✓	X	✓
58	203G1R0059	SUMA LAHARI KANUPURI	IV	✓	✓	✓
59	203G1R0060	SURAMPUDI BHAGYA SRI	IV	✓	X	✓
60	203G1R0061	TADALA MANIKANTA	IV	✓	X	✓
61	203G1R0062	TURIBATLA SRI MERCY	IV	✓	✓	✓
62	203G1R0063	V V SATYA SAI BHUMIKA NAKKA	IV	✓	✓	✓
63	203G1R0064	YALAGAPATI SONAPADMINI	IV	✓	✓	✓
64	203G1R0066	DHAVILESWARAPU NAGA SIVANI	IV	✓	✓	✓
65	203G1R0067	DODDIPATLA RAMAKRISHNA	IV	✓	X	✓
66	203G1R0068	LAKSHMI RATNA SREE KANCHARLA	IV	✓	✓	✓
67	203G1R0069	SANA NAGA SATISH	IV	✓	X	✓
68	203G1R0070	SOUMYA SAMANTA	IV	✓	✓	✓
69	203G1R0071	PRIYANKA CHOUDHARY	IV	✓	✓	✓
70	203G1R0072	RAUSHAN KUMAR YADAV	IV	✓	X	✓
71	203G1R0074	PAWAN KUMAR	IV	✓	✓	✓
72	203G1R0075	SIMRAN	IV	✓	✓	✓
73	203G1R0076	PREMABATI KUMARI SINGH	IV	✓	X	✓
74	203G1R0077	PRATIYUSH SRIVASTAVA	IV	✓	X	✓

75	203G1R0078	MUSUNOORI TEJASWI	IV	✓	X	✓
76	203G1R0079	AMAN BACHHAR	IV	✓	✓	✓
77	203G1R0080	SOURAV CHAKRABORTY	IV	✓	✓	✓
78	203G1R0081	EDALA SRI SINDHU	IV	✓	X	✓
79	203G1R0082	RABINDRA PRASAD YADAV	IV	✓	X	✓
80	203G1R0083	MOHAMMED DANISH RAFI KHAN	IV	✓	X	✓
81	203G1R0084	SHEKH ABDUL AHAD	IV	✓	✓	✓
82	203G1R0085	NARAYAN YADAV	IV	✓	✓	✓
83	203G1R0086	SONU TELI	IV	✓	✓	✓
84	203G1R0087	DWARAMPUDI SAI DEEPTHI RANI	IV	✓	✓	✓
85	203G1R0088	NITESH KUMAR YADAV	IV	✓	✓	✓
86	203G1R0089	U LAKSHMI SATYA TULASI KOTHAPALLI	IV	✓	X	✓
87	203G1R0090	KOPPULA MANASWI	IV	✓	X	✓
88	203G1R0091	RAJANA ALEKHYA	IV	✓	✓	✓
89	203G1R0092	PUROHITH PANJI	IV	✓	X	✓
90	203G1R0093	RABINDRA KUMAR CHAUDHARY	IV	✓	✓	✓
91	203G1R0094	MOGILIKOLLA SURESH	IV	✓	✓	✓
92	203G1R0095	YAKA VANI DURGA PRASANNA	IV	✓	✓	✓
93	203G1R0096	BIKASH BARUAH	IV	✓	X	✓
94	203G1R0097	MANDAPAKA SUDHA MANJOOSHA	IV	✓	X	✓
95	203G1R0098	GANDHAM SIVA PRASAD	IV	✓	X	✓
96	203G1R0099	CHALLAPALLI UDAYA SANDHYA	IV	✓	✓	✓



LIST OF STUDENTS UNDERTAKING PROJECT WORK/INTERNSHIP/FIELD WORK

THE ACADEMIC YEAR 2023-24.

I M.PHARM (PHARMACEUTICS)

S.No.	REG.No.	NAME OF THE CANDIDATE	YEAR	PROJECT	INTERNSHIP	FIELD WORK
1	233G1S0301	CHALLA SAI KRISHNA	I	X	X	✓



LIST OF STUDENTS UNDERTAKING PROJECT WORK/INTERNSHIP/FIELD WORK

THE ACADEMIC YEAR 2023-24.

I M.PHARM (ANALYSIS)

S.No.	REG.No.	NAME OF THE CANDIDATE	YEAR	PROJECT	INTERNSHIP	FIELD WORK
1	233G1S1601	ACHANTA MANEESH KUMAR	I	X	X	✓
2	233G1S1602	ADAPA ESTHERU RANI	I	X	X	✓
3	233G1S1603	M YAMINI	I	X	X	✓
4	233G1S1604	THOTA SATYA SAI	I	X	X	✓



LIST OF STUDENTS UNDERTAKING PROJECT WORK/INTERNSHIP/FIELD WORK

THE ACADEMIC YEAR 2023-24.

I M.PHARM (PHARMACEUTICS)

S.No.	REGD .No.	NAME OF THE CANDIDATE	YEAR	PROJECT	INTERNSHIP	FIELD WORK
1	223G1S0301	NARRA SRI BHAVYA	II	✓	X	X
2	223GIS0302	PECHETTI SAI KIRAN	II	✓	X	X



LIST OF STUDENTS UNDERTAKING PROJECT WORK/INTERNSHIP/FIELD WORK

THE ACADEMIC YEAR 2023-24.

I PHARM.D

S.No.	REG.No.	NAME OF THE CANDIDATE	YEAR	PROJECT	INTERNSHIP	FIELD WORK
1	233G1T0001	ARINDAM CHAKRABORTY	I	X	X	✓
2	233G1T0002	BALIJI VIJAYASREE	I	X	X	✓
3	233G1T0003	BHALLAM SIVARAMA KRISHNAM RAJU	I	X	X	✓
4	233G1T0004	BHUPATHI DHANUSRI	I	X	X	✓
5	233G1T0005	BOMMISSETTI RAJA RAJESWARI	I	X	X	✓
6	233G1T0006	CHINTHA VAISHNAVI	I	X	X	X
7	233G1T0007	CHITTAMSETTI D V S PRAVALLIKA	I	X	X	✓
8	233G1T0008	CHORAGUDI KEERTHI	I	X	X	✓
9	233G1T0009	DEBJYOTI MAN	I	X	X	✓
10	233G1T0010	DEVYANI SINGH		X	X	✓
11	233G1T0011	DOMMETI NAGA SAI RAJESWARI	I	X	X	✓
12	233G1T0012	JOGI VYSHNAVI	I	X	X	✓
13	233G1T0013	KALIPINDI PRADEEP	I	X	X	✓
14	233G1T0014	KILLO ANITHA RANI	I	X	X	✓
15	233G1T0015	KOTA MOUNIKA SRAVANTHI	I	X	X	✓
16	233G1T0016	KUPPILI KEERTHI VARSHINI	I	X	X	✓
17	233G1T0017	LOLLA RESHMA SRI	I	X	X	✓

18	233G1T0018	MADDA ANIL KUMAR	I	X	X	✓
19	233G1T0019	MANYALA BHANUSRI	I	X	X	✓
20	233G1T0020	NADISETTI SANDHYA	I	X	X	✓
21	233G1T0021	PASALA MANMADHA RAO	I	X	X	✓
22	233G1T0022	PEPAKAYALA VEDA ANKITHA	I	X	X	✓
23	233G1T0023	PERARAPU JYOTHIRMAI SAI SATYA SRI	I	X	X	✓
24	233G1T0024	PRASANTA DAS	I	X	X	✓
25	233G1T0025	PYLA MANASA	I	X	X	✓
26	233G1T0026	RAYUDU SWATHI	I	X	X	✓
27	233G1T0027	SANTOS HEIGRUJAM	I	X	X	X
28	233G1T0028	SURAMPUDI SRILATHA	I	X	X	✓
29	233G1T0029	VEERANALA VAHINI	I	X	X	✓
30	233G1T0030	VIBHASH ANAND	I	X	X	✓
31	233G1T0031	YETURI SRAVANTHI	I	X	X	✓



LIST OF STUDENTS UNDERTAKING PROJECT WORK/INTERNSHIP/FIELD WORK

THE ACADEMIC YEAR 2023-24.

II PHARM.D

S. No.	REG. No.	NAME OF THE CANDIDATE	YEAR	PROJECT	INTERNSHIP	FIELD WORK
1	223G1T0001	AKASH SARKAR	II	X	X	✓
2	223G1T0002	AMALAKOTA LALASA	II	X	X	✓
3	223G1T0003	AYUSHI KUMARI	II	X	X	✓
4	223G1T0004	BACHALA CHARAN TEJA	II	X	X	✓
5	223G1T0005	BALLA SARANYA	II	X	X	✓
6	223G1T0006	BANDARI SURYA UDAY KUMAR	II	X	X	✓
7	223G1T0007	BOMMETI ASHA JYOTHI	II	X	X	✓
8	223G1T0008	CHINTHALA SNEHA LATHA	II	X	X	✓
9	223G1T0009	DAIDA PREETHI SOWMYA	II	X	X	✓
10	223G1T0010	DAKARAPU SRI NAGADURGA SATHISH	II	X	X	✓
11	223G1T0011	GANDI DHANA POOJITHA	II	X	X	✓
12	223G1T0012	GOKAVARAPU MANI KARTHIK	II	X	X	✓
13	223G1T0013	GOPI SAIVARA POOJA	II	X	X	✓
14	223G1T0014	GUTHALA VARSHA SRI	II	X	X	✓
15	223G1T0015	KOKKU KOMALA AISWARYA	II	X	X	✓

16	223G1T0016	KONDEPUDI BHAGYASRI SAI VENKATA LALITHA	II	X	X	✓
17	223G1T0017	KORANGI PRASANNA VEERAVENKATA VIGNESH RAJU	II	X	X	✓
18	223G1T0018	KUNDETI SRILAKSHMI	II	X	X	✓
19	223G1T0019	MAHADEB DAS	II	X	X	✓
20	223G1T0020	MOGALI VEDA AISHNI	II	X	X	✓
21	223G1T0021	NAGANABOYINA JHANSI	II	X	X	✓
22	223G1T0022	NURUKURTHI SATYA VARSHINI	II	X	X	✓
23	223G1T0023	PANDI DHANYA	II	X	X	✓
24	223G1T0024	PEDAPATI DURGA SAI SURYA PRANEETH KUMAR	II	X	X	✓
25	223G1T0025	RAVI VENKATA RISHITHA	II	X	X	✓
26	223G1T0026	S P NIVETHA	II	X	X	X
27	223G1T0027	SURADA SIVA NAGA MANINDRA	II	X	X	✓
28	223G1T0028	SWATI RANI	II	X	X	✓
29	223G1T0029	VADAVELLI ANITHA	II	X	X	✓
30	223G1T0030	VAKACHARLA BHUVAN BHASKAR	II	X	X	✓
31	223G1T0031	VEERAVENI CHAPPIDI	II	X	X	✓



LIST OF STUDENTS UNDERTAKING PROJECT WORK/INTERNSHIP/FIELD WORK

THE ACADEMIC YEAR 2023-24.

III PHARM.D

S.No.	REG.No.	NAME OF THE CANDIDATE	YEAR	PROJECT	INTERNSHIP	FIELD WORK
1	213G1T0001	ABBURI SRI SATYA SHINNEY	III	X	X	✓
2	213G1T0002	ALLU KAVITHA	III	X	X	✓
3	213G1T0003	BALLA SRI KRISHNA VENI	III	X	X	✓
4	213G1T0004	BORA SAI LAKSHMI	III	X	X	✓
5	213G1T0005	BORUSU BALAVENDRA SRINIVAS	III	X	X	✓
6	213G1T0006	CHANDANA JAHNAVI	III	X	X	✓
7	213G1T0007	DHAUMYA MAHAPATRA	III	X	X	✓
8	213G1T0008	DIPCHAND SHIT	III	X	X	✓
9	213G1T0009	DONA SATYA SRIHARSHA ARADADI	III	X	X	✓
10	213G1T0010	GURRALA DIVYASRI	III	X	X	✓
11	213G1T0011	JANIPALLI SAMYA	III	X	X	✓
12	213G1T0012	JYOTIRMOY PATI	III	X	X	✓
13	213G1T0013	KANURI VEERA MADHAVA LAKSHMI	III	X	X	✓
14	213G1T0014	KAVYA NAGA PRAVEENA JAKKA	III	X	X	✓
15	213G1T0015	KOPPISETTI ISWARYA VANI	III	X	X	✓

16	213G1T0016	MD ASIF	III	X	X	✓
17	213G1T0017	MUDAVATH PRASANTH NAIK	III	X	X	✓
18	213G1T0018	PARIMI LIKITHA	III	X	X	✓
19	213G1T0019	RAMOJU LAKSHMI DEVI LAHARI	III	X	X	✓
20	213G1T0020	VATRAPU MANIKANTA REDDY	III	X	X	✓



LIST OF STUDENTS UNDERTAKING PROJECT WORK/INTERNSHIP/FIELD WORK

THE ACADEMIC YEAR 2023-24.

IV PHARM.D

S.No.	REG.No.	NAME OF THE CANDIDATE	YEAR	PROJECT	INTERNSHIP	FIELD WORK
1	203G1T0001	ACHANTA LOKESH	IV	X	X	✓
2	203G1T0002	BOMMETI SARA AISWARYA	IV	X	X	✓
3	203G1T0003	BUDATI MOUNIKA	IV	X	X	✓
4	203G1T0005	DANDIPATI LALITHA MAHESWARI	IV	X	X	✓
5	203G1T0006	ENJETI SUSHMA	IV	X	X	X
6	203G1T0007	G SHREYA RAJ	IV	X	X	✓
7	203G1T0008	GUDIMETTLA HIMA BINDU	IV	X	X	✓
8	203G1T0010	KAVURU SRAVAN SAI	IV	X	X	✓
9	203G1T0011	MERUGU DIVYA	IV	X	X	✓
10	203G1T0012	PETTA SHINY	IV	X	X	✓
11	203G1T0013	PINIPE MERCY	IV	X	X	✓
12	203G1T0016	RAJANA PADMAJA	IV	X	X	✓
13	203G1T0017	RAMBUDDI PRIYANKA	IV	X	X	✓
14	203G1T0018	RITON SHIL	IV	X	X	✓
15	203G1T0019	SANIVARAPU PUSHPA SATYA MAHALAKSHMI	IV	X	X	✓
16	203G1T0020	SOWJANYA GANDI	IV	X	X	✓
17	203G1T0021	TEJASWI PHANINDHRA YELCHURI	IV	X	X	✓
18	203G1T0022	TEKUMUDI MANJARI	IV	X	X	✓

19	203G1T0023	KOLLU ESWAR SAI KIRAN	IV	X	X	✓
20	203G1T0025	MEHDI MOHAMMAD MOZADDEDI	IV	X	X	X



LIST OF STUDENTS UNDERTAKING PROJECT WORK/INTERNSHIP/FIELD WORK

THE ACADEMIC YEAR 2023-24.

IV B.PHARMACY

S.No.	REG.No.	NAME OF THE CANDIDATE	YEAR	PROJECT	INTERNSHIP	FIELD WORK
1	203G1R0001	AAVALA DEEPIKA	IV	✓	✓	✓
2	203G1R0002	ADAPA VIJAY KUMAR	IV	✓	✓	✓
3	203G1R0003	ADHIKARI VARSHA ANUPAMA	IV	✓	✓	✓
4	203G1R0004	ALLIMPALLI MADHURI DEVI	IV	✓	✓	✓
5	203G1R0005	ALLU KESAVARDHINI	IV	✓	X	✓
6	203G1R0006	ANIMIREDDI JYOTHI VARAPRASAD	IV	✓	✓	✓
7	203G1R0007	ANISETTI MANIKANTA	IV	✓	X	✓
8	203G1R0008	ANNE SAI SREENIVAS	IV	✓	X	✓
9	203G1R0009	BANDARU SAI DURGA	IV	✓	✓	✓
10	203G1R0010	BODDU SAI SRI VANDANA	IV	✓	X	✓
11	203G1R0011	BOJJA VASANTHA	IV	✓	✓	✓
12	203G1R0012	BORRA VIGNITA	IV	✓	✓	✓
13	203G1R0013	CHAKKA DIMPULE SRI CHANDRIKA	IV	✓	X	✓
14	203G1R0015	CHERUVUPALLI SREENU	IV	✓	X	✓
15	203G1R0016	CHINTHA GAYATHRI MANISHA	IV	✓	X	✓
16	203G1R0017	CHITRADA SATISH	IV	✓	X	✓

17	203G1R0018	CHITTIBOMMA SIVA NANDHINI	IV	✓	X	✓
18	203G1R0019	CHOLLA VAMSI VIKRAM	IV	✓	X	✓
19	203G1R0020	DANDUPROLU SANDYA	IV	✓	✓	✓
20	203G1R0021	DATLA CHANDANA SRI	IV	✓	✓	✓
21	203G1R0022	DEYYALA LAXMAN	IV	✓	✓	✓
22	203G1R0023	GAMIDI SRAVYA	IV	✓	X	✓
23	203G1R0024	GEESALA AMUKTHA	IV	✓	✓	✓
24	203G1R0025	GRANDHI LAKSHMI VAISHNAVI	IV	✓	X	✓
25	203G1R0026	GUBBALA KEERTHI	IV	✓	X	✓
26	203G1R0027	GUBBALA RUTH CHANDRIKA	IV	✓	X	✓
27	203G1R0028	GUNNAM SARANYA	IV	✓	X	✓
28	203G1R0029	GURUBILLI SIVAKUMAR	IV	✓	X	✓
29	203G1R0030	IMMIDISETTI TEJASWINI	IV	✓	X	✓
30	203G1R0031	INAKOTI SONIYA SANTI	IV	✓	X	✓
31	203G1R0032	KEDARISETTY MEGHANA KAVYA	IV	✓	✓	✓
32	203G1R0033	KAKI MEGHANA	IV	✓	✓	✓
33	203G1R0034	KALADI DEEPIKA	IV	✓	X	✓
34	203G1R0035	KALADI SATYA SRI	IV	✓	X	✓
35	203G1R0036	KANDULA D VEERA VENKATA LAXMI SURENDRA	IV	✓	X	✓
36	203G1R0037	KANDULA PRAVEEN	IV	✓	X	✓
37	203G1R0038	KARRI PAVANI SRI SAI ANVITHA	IV	✓	X	✓
38	203G1R0039	KEDARISETTI NAGA SAI SATYAKUMARI	IV	✓	X	✓
39	203G1R0040	KETIREDDI NAGA VENKATA SRI LAKSHMI MOHITI	IV	✓	X	✓
40	203G1R0041	KILLI NEELIMA	IV	✓	✓	✓
41	203G1R0042	KOSANAM SIVAGANGA	IV	✓	X	✓
42	203G1R0043	MANE BOOMICA	IV	✓	X	✓
43	203G1R0044	MATCHA SAILAJA	IV	✓	✓	✓
44	203G1R0045	MOHAMMAD ABDUL RAHIM	IV	✓	X	✓
45	203G1R0046	MOHAMMED YUSUF	IV	✓	X	✓
46	203G1R0047	MORTHA BESODYAN	IV	✓	X	✓

		SATYAM				
47	203G1R0048	NALLAMELLI ANITHA	IV	✓	X	✓
48	203G1R0049	NAMBALLA BHARGAVI	IV	✓	X	✓
49	203G1R0050	OBILSETTI GOWRI APARNA RAJESWARI	IV	✓	✓	✓
50	203G1R0051	PALAPARTHI VEERA GANI LAKSHMI	IV	✓	✓	✓
51	203G1R0052	POTTIKA HEMAVATHI	IV	✓	X	✓
52	203G1R0053	RANGANADHAM MOUNIKA	IV	✓	✓	✓
53	203G1R0054	SALADI SAI SRIRAM	IV	✓	✓	✓
54	203G1R0055	SEELA PRADEEP	IV	✓	X	✓
55	203G1R0056	SEELAM LEELAVATHI	IV	✓	X	✓
56	203G1R0057	SETTI AMRUTHA SRI	IV	✓	✓	✓
57	203G1R0058	SIDDABATTULA SRAVANTHI	IV	✓	X	✓
58	203G1R0059	SUMA LAHARI KANUPURI	IV	✓	✓	✓
59	203G1R0060	SURAMPUDI BHAGYA SRI	IV	✓	X	✓
60	203G1R0061	TADALA MANIKANTA	IV	✓	X	✓
61	203G1R0062	TURIBATLA SRI MERCY	IV	✓	✓	✓
62	203G1R0063	V V SATYA SAI BHUMIKA NAKKA	IV	✓	✓	✓
63	203G1R0064	YALAGAPATI SONAPADMINI	IV	✓	✓	✓
64	203G1R0066	DHAVILESWARAPU NAGA SIVANI	IV	✓	✓	✓
65	203G1R0067	DODDIPATLA RAMAKRISHNA	IV	✓	X	✓
66	203G1R0068	LAKSHMI RATNA SREE KANCHARLA	IV	✓	✓	✓
67	203G1R0069	SANA NAGA SATISH	IV	✓	X	✓
68	203G1R0070	SOUMYA SAMANTA	IV	✓	✓	✓
69	203G1R0071	PRIYANKA CHOUDHARY	IV	✓	✓	✓
70	203G1R0072	RAUSHAN KUMAR YADAV	IV	✓	X	✓
71	203G1R0074	PAWAN KUMAR	IV	✓	✓	✓
72	203G1R0075	SIMRAN	IV	✓	✓	✓
73	203G1R0076	PREMABATI KUMARI SINGH	IV	✓	X	✓
74	203G1R0077	PRATIYUSH SRIVASTAVA	IV	✓	X	✓

75	203G1R0078	MUSUNOORI TEJASWI	IV	✓	X	✓
76	203G1R0079	AMAN BACHHAR	IV	✓	✓	✓
77	203G1R0080	SOURAV CHAKRABORTY	IV	✓	✓	✓
78	203G1R0081	EDALA SRI SINDHU	IV	✓	X	✓
79	203G1R0082	RABINDRA PRASAD YADAV	IV	✓	X	✓
80	203G1R0083	MOHAMMED DANISH RAFI KHAN	IV	✓	X	✓
81	203G1R0084	SHEKH ABDUL AHAD	IV	✓	✓	✓
82	203G1R0085	NARAYAN YADAV	IV	✓	✓	✓
83	203G1R0086	SONU TELI	IV	✓	✓	✓
84	203G1R0087	DWARAMPUDI SAI DEEPTHI RANI	IV	✓	✓	✓
85	203G1R0088	NITESH KUMAR YADAV	IV	✓	✓	✓
86	203G1R0089	U LAKSHMI SATYA TULASI KOTHAPALLI	IV	✓	X	✓
87	203G1R0090	KOPPULA MANASWI	IV	✓	X	✓
88	203G1R0091	RAJANA ALEKHYA	IV	✓	✓	✓
89	203G1R0092	PUROHITH PANJI	IV	✓	X	✓
90	203G1R0093	RABINDRA KUMAR CHAUDHARY	IV	✓	✓	✓
91	203G1R0094	MOGILIKOLLA SURESH	IV	✓	✓	✓
92	203G1R0095	YAKA VANI DURGA PRASANNA	IV	✓	✓	✓
93	203G1R0096	BIKASH BARUAH	IV	✓	X	✓
94	203G1R0097	MANDAPAKA SUDHA MANJOOSHA	IV	✓	X	✓
95	203G1R0098	GANDHAM SIVA PRASAD	IV	✓	X	✓
96	203G1R0099	CHALLAPALLI UDAYA SANDHYA	IV	✓	✓	✓



LIST OF STUDENTS UNDERTAKING PROJECT WORK/INTERNSHIP/FIELD WORK

THE ACADEMIC YEAR 2023-24.

V PHARM.D

S.No.	REG.No.	NAME OF THE CANDIDATE	YEAR	PROJECT	INTERNSHIP	FIELD WORK
1	193G1T0001	AKASAPU MADHURI	V	✓	X	X
2	193G1T0002	ALLAVARAPU MANOGNA	V	✓	X	X
3	193G1T0003	BATHULA AMULYA	V	✓	X	X
4	193G1T0004	BOKKA PRADEEPTHI	V	✓	X	X
5	193G1T0005	CHIKKALA BHAGYA ARUNA	V	✓	X	X
6	193G1T0006	CHILAKA SWARNA KISHORE	V	✓	X	X
7	193G1T0007	DHANDUPROLU SATISH	V	✓	X	X
8	193G1T0008	DUDA SHAKINA	V	✓	X	X
9	193G1T0009	ESHITA LAL	V	✓	X	X
10	193G1T0010	GIDLA HEPZIBAH RANI	V	✓	X	X
11	193G1T0011	GUDIVADA SANKEERTHANA	V	✓	X	X
12	193G1T0012	JAKKULA SUPRIYA	V	✓	X	X
13	193G1T0013	LALAM MOUNIKA	V	✓	X	X
14	193G1T0014	MANISHA LAHKAR	V	✓	X	X
15	193G1T0015	NIRMALYA ROY	V	✓	X	X
16	193G1T0016	NISHAR AHMED	V	✓	X	X
17	193G1T0017	RISHAV	V	✓	X	X
18	193G1T0018	SANKHANIL PANDA	V	✓	X	X
19	193G1T0019	SONGA	V	✓	X	X

		PREMCHAND				
20	193G1T0021	THOTA THANMAYI SAI LAKSHMI	V	✓	X	X
21	193G1T0022	VANARASI SRI SATYA MANOJNA NAIDU	V	✓	X	X
22	193G1T0023	VEMANA HEMA RATNA SAI LAKSHMI	V	✓	X	X
23	193G1T0024	YATI RAJ	V	✓	X	X
24	193G1T0025	YOGANANDAM SUHARIKA	V	✓	X	X
25	193G1T0026	KALIGITHI SUNANDA	V	✓	X	X
26	193G1T0027	KALLEPALLI DEEVENA DAS	V	✓	X	X
27	193G1T0029	KONIDENI VENKATA SAI CHARAN	V	✓	X	X
28	193G1T0030	ULISI LAKSHMI SRI VENKATA NARAYANA	V	✓	X	X

ADITYA

PHARMACY COLLEGE

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8 PHARMACY STUDENTS PROJECTS LIST (2023-2024)

Batch Number	Reg. Number	Name of the student	Title of the project	Name of the supervisor
1	203G1R0001	AAVALA DEEPIKA	FORMULATION AND EVALUATION OF VALSARTAN FAST DISSOLVING TABLETS	Dr. T. UDAY KUMAR, M. PHARM, PH. D
	203G1R0002	ADAPA VIJAY KUMAR	FORMULATION AND EVALUATION OF VALSARTAN FAST DISSOLVING TABLETS	Dr. T. UDAY KUMAR, M. PHARM, PH. D
	203G1R0003	ADHIKARI VARSHA ANUPAMA	FORMULATION AND EVALUATION OF VALSARTAN FAST DISSOLVING TABLETS	Dr. T. UDAY KUMAR, M. PHARM, PH. D
	203G1R0004	ALLIMPALLI MADHURI DEVI	FORMULATION AND EVALUATION OF VALSARTAN FAST DISSOLVING TABLETS	Dr. T. UDAY KUMAR, M. PHARM, PH. D
	203G1R0005	ALLU KESAVARDHINI	FORMULATION AND EVALUATION OF VALSARTAN FAST DISSOLVING TABLETS	Dr. T. UDAY KUMAR, M. PHARM, PH. D
2	203G1R0006	ANIMIREDDY JYOTHI	PHYTOCHEMICAL	Mr. S. NAGESWARAO, M.

		VARAPRASAD	EVALUATION OF INVITRO ANTIOXIDANT ACTIVITY OF ACCACIA NILOTICA BARK EXTRACT	PHARM
	203G1R0007	ANISETTI MANIKANTA	PHYTOCHEMICAL EVALUATION OF INVITRO ANTIOXIDANT ACTIVITY OF ACCACIA NILOTICA BARK EXTRACT	Mr. S. NAGESWARAO, M. PHARM., (Ph.D).
	203G1R0008	ANNE SREENIVAS	PHYTOCHEMICAL EVALUATION OF INVITRO ANTIOXIDANT ACTIVITY OF ACCACIA NILOTICA BARK EXTRACT	Mr. S. NAGESWARAO, M. PHARM., (Ph.D).
	203G1R0009	BANDARU SAI DURGA	PHYTOCHEMICAL EVALUATION OF INVITRO ANTIOXIDANT ACTIVITY OF ACCACIA NILOTICA BARK EXTRACT	Mr. S. NAGESWARAO, M. PHARM., (Ph.D).
	203G1R0010	BODDU SAI SRI VANDHANA	PHYTOCHEMICAL EVALUATION OF INVITRO ANTIOXIDANT ACTIVITY OF ACCACIA NILOTICA BARK EXTRACT	Mr. S. NAGESWARAO, M. PHARM., (Ph.D).
3	203G1R0011	BOJJA VASANTHA	FORMULATION AND EVALUATION OF SALICYLIC ACID EXTENDED RELEASE TABLETS USING MUSA PARADISIACA POWDER	Dr. CH. S. PHANI KUMAR M. PHARM., Ph. D.
	203G1R0012	BORRA VIGNITA	FORMULATION AND EVALUATION OF SALICYLIC ACID EXTENDED RELEASE TABLETS USING MUSA	Dr. CH. S. PHANI KUMAR M. PHARM., Ph.D.

			PARADISIACA POWDER	Dr. CH. S. PHANI KUMAR M. PHARM, Ph. D.
	203G1R0013	CHAKKA DIMPULESRI CHANDRIKA	FORMULATION AND EVALUATION OF SALICYLIC ACID EXTENDED RELEASE TABLETS USING MUSA PARADISIACA POWDER	
	203G1R0015	CHERUVUPALLI SREENU	FORMULATION AND EVALUATION OF SALICYLIC ACID EXTENDED RELEASE TABLETS USING MUSA PARADISIACA POWDER	Dr. CH. S. PHANI KUMAR M. PHARM, Ph. D
	203G1R0016	CHINTHA GAYATHRI MANISHA	FORMULATION AND EVALUATION OF SALICYLIC ACID EXTENDED RELEASE TABLETS USING MUSA PARADISIACA POWDER	Dr. CH. S. PHANI KUMAR M. PHARM, Ph. D.
4	203G1R0017	CHITRADA SATISH	ANTI-BACTERIAL AND ANTI- OXIDANT ACTIVITY OF ETHANOLIC FLOWERS EXTRACT OF WOODFORDIA FRUTICOSA	K. SUDHA RANI, M. PHARM
	203G1R0018	CHITTIBOMMIMA SIVA NANDHINI	ANTI-BACTERIAL AND ANTI- OXIDANT ACTIVITY OF ETHANOLIC FLOWERS EXTRACT OF WOODFORDIA FRUTICOSA	K. SUDHA RANI, M. PHARM
	203G1R0019	CHOLLA VAMSI VIKRAM	ANTI-BACTERIAL AND ANTI- OXIDANT ACTIVITY OF ETHANOLIC FLOWERS EXTRACT OF WOODFORDIA FRUTICOSA	K. SUDHA RANI, M. PHARM
	203G1R0020	DANDUPROLU SANDYA	ANTI-BACTERIAL AND ANTI- OXIDANT ACTIVITY OF	K. SUDHA RANI, M. PHARM

			ETHANOLIC FLOWERS EXTRACT OF WOODFORDIA FRUTICOSA	K. SUDHA RANI, M. PHARM
	203G1R0021	DATLA CHANDANA SRI	ANTI-BACTERIAL AND ANTI- OXIDANT ACTIVITY OF ETHANOLIC FLOWERS EXTRACT OF WOODFORDIA FRUTICOSA	
5	203G1R0022	DEYYALA LAXMAN	MICROWAVE ASSISTED SYNTHESIS, DOCKING STUDIES AND POTENTIAL APPLICATIONS OF BENZIMIDAZOLE DERIVATIVES	TANINKI SRI SOWKHYA M.PHARM
	203G1R0023	GAMIDI SRAVYA	MICROWAVE ASSISTED SYNTHESIS, DOCKING STUDIES AND POTENTIAL APPLICATIONS OF BENZIMIDAZOLE DERIVATIVES	TANINKI SRI SOWKHYA M.PHARM
	203G1R0024	GEESALA AMUKTHA	MICROWAVE ASSISTED SYNTHESIS, DOCKING STUDIES AND POTENTIAL APPLICATIONS OF BENZIMIDAZOLE DERIVATIVES	TANINKI SRI SOWKHYA M.PHARM
	203G1R0025	GRANDHI LAKSHMI VAISHNAVI	MICROWAVE ASSISTED SYNTHESIS, DOCKING STUDIES AND POTENTIAL APPLICATIONS OF BENZIMIDAZOLE DERIVATIVES	TANINKI SRI SOWKHYA M.PHARM
	203G1R0026	GUBBALA KEERTHI	MICROWAVE ASSISTED	TANINKI SRI SOWKHYA

			SYNTHESIS, DOCKING STUDIES AND POTENTIAL APPLICATIONS OF BENZIMIDAZOLE DERIVATIVES	M.PHARM
6	203G1R0027	GUBBALA RUTH CHANDRIKA	FORMULATION, EVALUATION AND COMPARISON OF APIXABAN IMMEDIATE RELEASE TABLETS: A COMPREHENSIVE STUDY WITH MARKETED PRODUCTS FOR SIMILARITY FACTOR ANALYSIS	Mr. DASARI. NAGASEN, M. PHARM., (Ph. D)
	203G1R0028	GUNNAM SARANYA	FORMULATION, EVALUATION AND COMPARISON OF APIXABAN IMMEDIATE RELEASE TABLETS: A COMPREHENSIVE STUDY WITH MARKETED PRODUCTS FOR SIMILARITY FACTOR ANALYSIS	Mr. DASARI. NAGASEN, M. PHARM., (Ph. D)
	203G1R0029	GURUBILLI SIVA KUMAR	FORMULATION, EVALUATION AND COMPARISON OF APIXABAN IMMEDIATE RELEASE TABLETS: A COMPREHENSIVE STUDY WITH MARKETED PRODUCTS FOR SIMILARITY FACTOR ANALYSIS	Mr. DASARI. NAGASEN, M. PHARM., (Ph. D)
	203G1R0030	IMMIDISETTI TEJASWINI	FORMULATION,	Mr. DASARI. NAGASEN, M.

			EVALUATION AND COMPARISON OF APIXABAN IMMEDIATE RELEASE TABLETS: A COMPREHENSIVE STUDY WITH MARKETED PRODUCTS FOR SIMILARITY FACTOR ANALYSIS	PHARM., (Ph. D)
	203G1R0031	INAKOTI SONIYA SANTI	FORMUALTION, EVALUATION AND COMPARISON OF APIXABAN IMMEDIATE RELEASE TABLETS: A COMPREHENSIVE STUDY WITH MARKETED PRODUCTS FOR SIMILARITY FACTOR ANALYSIS	MR. DASARI, NAGASEN, M. PHARM., (Ph. D)
7	203G1R0032	KEDARISETTY MEGHNA KAVYA	ASSESSMENT OF PREBIOTIC ACTIVITY AND PHYTOCHEMICAL SCREENING OF TAMARIND SEED EXTRACT. DECODING THE TAMARIND SEED'S PREBIOTIC ACTIVITY IN CHOCOLATES	MATTA SARIKA, M. PHARM, (Ph. D)
	203G1R0033	KAKI MEGHANA	ASSESSMENT OF PREBIOTIC ACTIVITY AND PHYTOCHEMICAL SCREENING OF TAMARIND SEED EXTRACT. DECODING THE TAMARIND SEED'S PREBIOTIC ACTIVITY IN CHOCOLATES	MATTA SARIKA, M. PHARM, (Ph. D)

	203G1R0034	KALADI DEEPIKA	ASSESSMENT OF PREBIOTIC ACTIVITY AND PHYTOCHEMICAL SCREENING OF TAMARIND SEED EXTRACT. DECODING THE TAMARIND SEED'S PREBIOTIC ACTIVITY IN CHOCOLATES	MATTA SARIKA, M.PHARM, (Ph. D)
	203G1R0035	KALADI SATYA SRI	ASSESSMENT OF PREBIOTIC ACTIVITY AND PHYTOCHEMICAL SCREENING OF TAMARIND SEED EXTRACT. DECODING THE TAMARIND SEED'S PREBIOTIC ACTIVITY IN CHOCOLATES	MATTA SARIKA, M.PHARM, (Ph. D)
	203G1R0036	KANDULA DIVY SURENDRA	ASSESSMENT OF PREBIOTIC ACTIVITY AND PHYTOCHEMICAL SCREENING OF TAMARIND SEED EXTRACT. DECODING THE TAMARIND SEED'S PREBIOTIC ACTIVITY IN CHOCOLATES	MATTA SARIKA, M.PHARM, (Ph. D)
8	203G1R0037	KANDULA PRAVEEN	COMPARATIVE STUDY OF SUPER DISINTEGRANTS USING ANTI-AMOEBIIC DRUGS AS A MODEL	GOWRIPATTAPU SRIDEVI M. PHARM, (Ph. D)
	203G1R0038	KARRI PAVANI SRI SAI ANVITHA	COMPARATIVE STUDY OF SUPER DISINTEGRANTS USING ANTI-AMOEBIIC DRUGS AS A MODEL	GOWRIPATTAPU SRIDEVI M. PHARM, (Ph. D)
	203G1R0039	KEDARISETTI NAGA SAI	COMPARATIVE STUDY OF	GOWRIPATTAPU SRIDEVI M.

		SATYA KUMARI	SUPER DISINTEGRANTS USING ANTI-AMOEBIIC DRUGS AS A MODEL	PHARM, (Ph. D)
	203G1R0040	KETIREDDI NAGA VENKATA SRI LAKSHMI MOHITI	COMPARATIVE STUDY OF SUPER DISINTEGRANTS USING ANTI-AMOEBIIC DRUGS AS A MODEL	GOWRIPATTAPU SRIDEVI M. PHARM, (Ph. D)
	203G1R0041	KILLI NEELIMA	COMPARATIVE STUDY OF SUPER DISINTEGRANTS USING ANTI-AMOEBIIC DRUGS AS A MODEL	GOWRIPATTAPU SRIDEVI M. PHARM, Ph. D
9	203G1R0042	KOSANAM SIVAGANGA	SYNTHESIS AND ANTIBACTERIAL ACTIVITY OF SOME NOVAL 4-(1H-BENZO[D][1,2,3]TRIAZOL-1-YL)-6-PHENYL-5,6-DIHYDROPYRAMIDIN-2(1H)-THIONE	Mr. SHAIK RAFI, M. PHARM
	203G1R0043	MANE BOOMICA	SYNTHESIS AND ANTIBACTERIAL ACTIVITY OF SOME NOVAL 4-(1H-BENZO[D][1,2,3]TRIAZOL-1-YL)-6-PHENYL-5,6-DIHYDROPYRAMIDIN-2(1H)-THIONE	Mr. SHAIK RAFI, M. PHARM
	203G1R0044	MATCHA SAILAJA	SYNTHESIS AND ANTIBACTERIAL ACTIVITY OF SOME NOVAL 4-(1H-BENZO[D][1,2,3]TRIAZOL-1-YL)-6-PHENYL-5,6-DIHYDROPYRAMIDIN-2(1H)-THIONE	Mr. SHAIK RAFI, M. PHARM
	203G1R0045	MD ABDUL RAHIM	SYNTHESIS AND	Mr. SHAIK RAFI, M. PHARM

			ANTIBACTERIAL ACTIVITY OF SOME NOVAL 4-(1H-BENZO[D][1,2,3]TRIAZOL-1-YL)-6-PHENYL-5,6-DIHYDROPYRAMIDIN-2(1H)-THIONE	
10	203G1R0046	MOHAMMED YUSUF	PHYTOCHEMICAL EVALUATION OF INVITRO ANTICOAGULANT ACTIVITY OF GYMNEMA SYLVESTRE	Dr. S. NAGESWARAO, M. PHARM, (Ph. D)
	203G1R0047	MORTH A BESODHYAN SATYAM	PHYTOCHEMICAL EVALUATION OF INVITRO ANTICOAGULANT ACTIVITY OF GYMNEMA SYLVESTRE	Dr. S. NAGESWARAO, M. PHARM, (Ph. D)
	203G1R0048	NALLAMELLI ANTHA	PHYTOCHEMICAL EVALUATION OF INVITRO ANTICOAGULANT ACTIVITY OF GYMNEMA SYLVESTRE	Dr. S. NAGESWARAO, M. PHARM, Ph. D
	203G1R0049	NAMBALLA BHARGAVI	PHYTOCHEMICAL EVALUATION OF INVITRO ANTICOAGULANT ACTIVITY OF GYMNEMA SYLVESTRE	Dr. S. NAGESWARAO, M. PHARM, (Ph. D)
11	203G1R0050	OBISETTI GOWRI APARNA RAJESWARI	FORMULATION AND EVALUATION OF POLY HERBAL SOAP	Mrs. G. PRASANTHI, M. PHARM, (Ph. D)
	203G1R0051	PALAPATRTHI VEERA GANI LAKSHMI	FORMULATION AND EVALUATION OF POLY HERBAL SOAP	Mrs. G. PRASANTHI, M. PHARM, (Ph. D)
	203G1R0052	POTTIKA HEMAVATHI	FORMULATION AND EVALUATION OF POLY HERBAL SOAP	Mrs. G. PRASANTHI, M. PHARM, (Ph. D)
	203G1R0053	RANGANADHAM MOUNIKA	FORMULATION AND EVALUATION OF POLY	Mrs. G. PRASANTHI, M. PHARM, (Ph. D)

				HERBAL SOAP	
12	203G1R0054	SALADI SAI SRIRAM	PHYTOCHEMICAL SCREENING AND ANTIBACTERIAL ACTIVITY OF METHANOLIC LEAF EXTRACT OF "FICUS NOTA PLANT"	Dr. P. BHASKARA RAO, M. PHARM, Ph. D.	
	203G1R0055	SEELA PRADEEP	PHYTOCHEMICAL SCREENING AND ANTIBACTERIAL ACTIVITY OF METHANOLIC LEAF EXTRACT OF "FICUS NOTA PLANT"	Dr. P. BHASKARA RAO, M. PHARM, Ph. D.	
	203G1R0056	SEELAM LEELAVATHI	PHYTOCHEMICAL SCREENING AND ANTIBACTERIAL ACTIVITY OF METHANOLIC LEAF EXTRACT OF "FICUS NOTA PLANT"	Dr. P. BHASKARA RAO, M. PHARM, Ph. D.	
	203G1R0057	SETTI AMRUTHA SRI	PHYTOCHEMICAL SCREENING AND ANTIBACTERIAL ACTIVITY OF METHANOLIC LEAF EXTRACT OF "FICUS NOTA PLANT"	Dr. P. BHASKARA RAO, M. PHARM, Ph. D.	
13	203G1R0058	SIDDABATTULA SRAVANTHI	3-CARBOXY PHENYL BORONIC ACID MODIFIED SILVER NANOPARTICLES IMPREGNATED ANTI-FUNGAL GEL FOR TREATMENT OF CUTANEOUS CANDIDIASIS	Dr. P.S.S.SAI KIRAN, M. PHARM, Ph. D.	
	203G1R0059	KANUPURI SUMA LAHARI	3-CARBOXY PHENYL BORONIC ACID MODIFIED SILVER NANOPARTICLES IMPREGNATED ANTI-FUNGAL GEL FOR TREATMENT OF CUTANEOUS CANDIDIASIS	Dr. P.S.S.SAI KIRAN, M. PHARM, Ph. D.	

	203G1R0060	SURAMPUDI BHAGYA SRI	3-CARBOXY PHENYL BORONIC ACID MODIFIED SILVER NANOPARTICLES IMPREGNATED ANTI-FUNGAL GEL FOR TREATMENT OF CUTANEOUS CANDIDIASIS	Dr. P.S.S.SAI KIRAN, M. PHARM, Ph. D.
	203G1R0061	TADALA MANIKANTA	3-CARBOXY PHENYL BORONIC ACID MODIFIED SILVER NANOPARTICLES IMPREGNATED ANTI-FUNGAL GEL FOR TREATMENT OF CUTANEOUS CANDIDIASIS	Dr. P.S.S.SAI KIRAN, M. PHARM, Ph. D.
14	203G1R0062	TURIBATLA SRI MERCY	SYNTHESIS AND CHARACTERIZATION AND BIOLOGICAL EVALUATION OF CHALCONE DERIVATIVES	Mr. SHAIK RAFI, M. PHARM
	203G1R0063	NAKKA VVSS BHIMIKA	SYNTHESIS AND CHARACTERIZATION AND BIOLOGICAL EVALUATION OF CHALCONE DERIVATIVES	Mr. SHAIK RAFI, M. PHARM
	203G1R0064	YALAGAPATI SONAPADMINI	SYNTHESIS AND CHARACTERIZATION AND BIOLOGICAL EVALUATION OF CHALCONE DERIVATIVES	Mr. SHAIK RAFI, M. PHARM
	203G1R0066	DHAVILESWARAPU NAGA SIVAMANI	SYNTHESIS AND CHARACTERIZATION AND BIOLOGICAL EVALUATION OF CHALCONE DERIVATIVES	Mr. SHAIK RAFI, M. PHARM
15	203G1R0067	D RAMA KRISHNA	EXPLORING ANDROGRAPHS:HARNESSING NANO STRUCTURE FOR ANTHELMENTIC POTENTIAL VIA LIPID CARRIER	Mr. G. RAMAKRISHNA, M. PHARM, (Ph. D)

			FORMULATION	
	203G1R0068	K LAKSHMI RATNA SREE	EXPLORING ANDROGRAPHS:HARNESSING NANO STRUCTURE FOR ANTHELMINTIC POTENTIAL VIA LIPID CARRIER FORMULATION	Mr. G. RAMAKRISHNA, M. PHARM., (Ph. D)
	203G1R0069	S NAGA SATISH	EXPLORING ANDROGRAPHS:HARNESSING NANO STRUCTURE FOR ANTHELMINTIC POTENTIAL VIA LIPID CARRIER FORMULATION	Mr. G. RAMAKRISHNA, M. PHARM., (Ph. D)
	203G1R0070	SOUMYA SAMANTA	EXPLORING ANDROGRAPHS:HARNESSING NANO STRUCTURE FOR ANTHELMINTIC POTENTIAL VIA LIPID CARRIER FORMULATION	Mr. G. RAMAKRISHNA, M. PHARM., (Ph. D)
16	203G1R0071	PRIVANKA CHOUDHARY	FORMULATION OF METRONIDAZOLE BY USING NATURAL AND SYNTHETIC SUPER DISINTEGRANT	Mrs. VALLABGAREDDY PRASANNA SAI SREE, M.Pharm.,
	203G1R0072	RAUSHAN KUMAR YADHAV	FORMULATION OF METRONIDAZOLE BY USING NATURAL AND SYNTHETIC SUPER DISINTEGRANT	Mrs. VALLABGAREDDY PRASANNA SAI SREE, M.Pharm.
	203G1R0074	PAWAN KUMAR	FORMULATION OF METRONIDAZOLE BY USING NATURAL AND SYNTHETIC SUPER DISINTEGRANT	Mrs. VALLABGAREDDY PRASANNA SAI SREE, M.Pharm.,
	203G1R0075	SIMIRAN	FORMULATION OF METRONIDAZOLE BY USING METRONIDAZOLE BY USING	Mrs. VALLABGAREDDY PRASANNA SAI SREE,

			NATURAL AND SYNTHETIC SUPER DISINTEGRANT	M.Pharm.,
17	203G1R0076	PREMABATI KUMARI SINGH	METHOD DEVELOPMENT AND VALIDATION OF EMPAGLIFOZIN (BULK AND FORMULATION) BY USING UV-VISIBLE SPECTROSCOPY	MISS. B. SUJIVA M. PHARM
	203G1R0077	PRATIYUSH SRIVSATAVA	METHOD DEVELOPMENT AND VALIDATION OF EMPAGLIFOZIN (BULK AND FORMULATION) BY USING UV-VISIBLE SPECTROSCOPY	MISS. B. SUJIVA M. PHARM
	203G1R0078	MUSUNDOORI LAKSHMI TEJASWI	METHOD DEVELOPMENT AND VALIDATION OF EMPAGLIFOZIN (BULK AND FORMULATION) BY USING UV-VISIBLE SPECTROSCOPY	MISS. B. SUJIVA M. PHARM
	203G1R0079	AMAN BACHHAR	METHOD DEVELOPMENT AND VALIDATION OF EMPAGLIFOZIN (BULK AND FORMULATION) BY USING UV-VISIBLE SPECTROSCOPY	MISS. B. SUJIVA M. PHARM
18	203G1R0080	SOURAV CHAKRABARTY	ASSESSMENT OF ANTI- UROLITHIATIC AND ANTIOXIDANT ACTIVITY OF COLOCASIA ESCULENTA ON STEM	Mrs. M. LALITHA KALA, M. PHARM
	203G1R0081	EDALA SRISINDHU	ASSESSMENT OF ANTI- UROLITHIATIC AND ANTIOXIDANT ACTIVITY OF COLOCASIA ESCULENTA ON STEM	Mrs. M. LALITHA KALA, M. PHARM
	203G1R0082	RABINDRA PRASAD YADAV	ASSESSMENT OF ANTI-	Mrs. M. LALITHA KALA, M.

			UROLITHIATIC AND ANTIOXIDANT ACTIVITY OF COLOCASIA ESCULENTA ON STEM	PHARM
	203G1R0083	MOHAMMAD DANISH RAFI KHAN	ASSESSMENT OF ANTI- UROLITHIATIC AND ANTIOXIDANT ACTIVITY OF COLOCASIA ESCULENTA ON STEM	Mrs. M. LALITHA KALA, M. PHARM
19	203G1R0084	SHEKH ABDUL AHAD	MICROWAVE ASSISTED SYNTHESIS AND DOCKING STUDIES OF NOVAL DERIVATIVE OF 2,4,5-TRIPHENYL IMIDAZOLE	CH. LAKSHMI MADHAVI , M. PHARM, (Ph.D)
	203G1R0085	NARAYAN YADAV	MICROWAVE ASSISTED SYNTHESIS AND DOCKING STUDIES OF NOVAL DERIVATIVE OF 2,4,5-TRIPHENYL IMIDAZOLE	CH. LAKSHMI MADHAVI , M. PHARM, (Ph.D)
	203G1R0086	SONU TELI	MICROWAVE ASSISTED SYNTHESIS AND DOCKING STUDIES OF NOVAL DERIVATIVE OF 2,4,5-TRIPHENYL IMIDAZOLE	CH. LAKSHMI MADHAVI , M. PHARM, (Ph.D)
	203G1R0087	D SAI DEEPTHI RANI	MICROWAVE ASSISTED SYNTHESIS AND DOCKING STUDIES OF NOVAL DERIVATIVE OF 2,4,5-TRIPHENYL IMIDAZOLE	CH. LAKSHMI MADHAVI , M. PHARM,(Ph.D)
20	203G1R0089	U L S TULASI KOTHAPALLI	METHOD DEVELOPMENT AND VALIDATION FOR ATROPINE SULPHATE IN BULK AND TABLET DOSAGE	Dr. D. SATHIS KUMAR, M.PHARM, Ph.D

			FORM USING TURMERIC POWDER BY UV VISIBLE SPECTROPHOTOMETER	Dr. D. SATHIS KUMAR, M.PHARM, Ph.D
	203G1R0090	KOPULA MANASWI	METHOD DEVELOPMENT AND VALIDATION FOR ATROPINE SULPHATE IN BULK AND TABLET DOSAGE FORM USING TURMERIC POWDER BY UV VISIBLE SPECTROPHOTOMETER	
	203G1R0091	RAJANA ALEKHYA	METHOD DEVELOPMENT AND VALIDATION FOR ATROPINE SULPHATE IN BULK AND TABLET DOSAGE FORM USING TURMERIC POWDER BY UV VISIBLE SPECTROPHOTOMETER	Dr. D. SATHIS KUMAR, M.PHARM, Ph.D
21	203G1R0092	PANJI PUROHIT	COMPARISON PF QUALITATIVE ANALYSIS OF COW MILK, BUFFALO MILK AND MARKETED MILK	S. VANGMAYI SWAROOPA, M.PHARM.
	203G1R0093	RABINDRA KUMAR CHAUDHARY	COMPARISON PF QUALITATIVE ANALYSIS OF COW MILK, BUFFALO MILK AND MARKETED MILK	S. VANGMAYI SWAROOPA, M.PHARM.
	203G1R0094	M SURESH	COMPARISON PF QUALITATIVE ANALYSIS OF COW MILK, BUFFALO MILK AND MARKETED MILK	S. VANGMAYI SWAROOPA, M.PHARM.
	203G1R0095	Y. VANI DURGA PRASANNA	COMPARISON PF QUALITATIVE ANALYSIS OF COW MILK, BUFFALO MILK AND MARKETED MILK	S. VANGMAYI SWAROOPA, M.PHARM.

22	203G1R0096	BIKASH VARUAH	SYNTHESIS AND MOLECULAR DOCKING STUDIES ON CAPRYLIC ACID HYDRAZONES	L. PARINAYA SRI, M.PHARM.
	203G1R0097	SUDHA MANJOOSHA MANDAPAKA	SYNTHESIS AND MOLECULAR DOCKING STUDIES ON CAPRYLIC ACID HYDRAZONES	L. PARINAYA SRI, M.PHARM.
	203G1R0098	GANDHAM SIVA PRASAD	SYNTHESIS AND MOLECULAR DOCKING STUDIES ON CAPRYLIC ACID HYDRAZONES	L. PARINAYA SRI, M.PHARM.
	203G1R0099	UDAYA SANDHYA CHALLAPALLI	SYNTHESIS AND MOLECULAR DOCKING STUDIES ON CAPRYLIC ACID HYDRAZONES	L. PARINAYA SRI, M.PHARM.

ADVANCED BIOPHARMACEUTICS & PHARMACOKINETICS (MPH 202T)

Scope

This course is designed to impart knowledge and skills necessary for dose calculations, dose adjustments and to apply biopharmaceutics theories in practical problem solving. Basic theoretical discussions of the principles of biopharmaceutics and pharmacokinetics are provided to help the students' to clarify the concepts.

Objectives

Upon completion of this course it is expected that students will be able understand,

- The basic concepts in biopharmaceutics and pharmacokinetics.
- The use raw data and derive the pharmacokinetic models and parameters the best describe the process of drug absorption, distribution, metabolism and elimination.
- The critical evaluation of biopharmaceutic studies involving drug product equivalency.
- The design and evaluation of dosage regimens of the drugs using pharmacokinetic and biopharmaceutic parameters.
- The potential clinical pharmacokinetic problems and application of basics of pharmacokinetic

THEORY

60 Hrs

1. Drug Absorption from the Gastrointestinal Tract: 12 Hrs
Gastrointestinal tract, Mechanism of drug absorption, Factors affecting drug absorption, pH-partition theory of drug absorption. Formulation and physicochemical factors: Dissolution rate, Dissolution process, Noyes-Whitney equation and drug dissolution, Factors affecting the dissolution rate. Gastrointestinal absorption: role of the dosage form: Solution (elixir, syrup and solution) as a dosage form, Suspension as a dosage form, Capsule as a dosage form, Tablet as a dosage form, Dissolution methods, ~~Formulation~~ and processing factors, Correlation of in vivo data with in vitro dissolution data. Transport model: Permeability-Solubility-Charge State and the pH Partition Hypothesis, Properties of the Gastrointestinal Tract (GIT), pH Microclimate Intracellular pH Environment, Tight-Junction Complex.

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- 2 Biopharmaceutic considerations in drug product design and In Vitro Drug Product Performance: Introduction, biopharmaceutic factors affecting drug bioavailability, rate-limiting steps in drug absorption, physicochemical nature of the drug formulation factors affecting drug product performance, in vitro: dissolution and drug release testing, compendial methods of dissolution, alternative methods of dissolution testing, meeting dissolution requirements, problems of variable control in dissolution testing performance of drug products. In vitro-in vivo correlation, dissolution profile comparisons, drug product stability, considerations in the design of a drug product. 12 Hrs
- 3 Pharmacokinetics: Basic considerations, pharmacokinetic models, compartment modeling: one compartment model- IV bolus, IV infusion, extra-vascular. Multi compartment model: two compartment - model in brief, non-linear pharmacokinetics: cause of non-linearity, Michaelis - Menten equation, estimation of k_{max} and v_{max} . Drug interactions: introduction, the effect of protein-binding interactions, the effect of tissue-binding interactions, cytochrome p450-based drug interactions, drug interactions linked to transporters. 12 Hrs
- 4 Drug Product Performance, In Vivo: Bioavailability and Bioequivalence: drug product performance, purpose of bioavailability studies, relative and absolute availability. methods for assessing bioavailability, bioequivalence studies, design and evaluation of bioequivalence studies, study designs, crossover study designs, evaluation of the data, bioequivalence example, study submission and drug review process. biopharmaceutics classification system, methods. Permeability: In-vitro, in-situ and In-vivo methods. generic biologics (biosimilar drug products), clinical significance of bioequivalence studies, special concerns in bioavailability and bioequivalence studies, generic substitution. 12 Hrs
- 5 Application of Pharmacokinetics: Modified-Release Drug Products, Targeted Drug Delivery Systems and Biotechnological Products. Introduction to Pharmacokinetics and pharmacodynamic, drug interactions. Pharmacokinetics and pharmacodynamics of biotechnology drugs. Introduction, Proteins and peptides, Monoclonal antibodies, Oligonucleotides, Vaccines (immunotherapy), Gene therapies. 12 Hrs

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3. Applied Biopharmaceutics and Pharmacokinetics by Shargel. Land YuABC, 2nd edition, Connecticut Appleton Century Crofts, 1985
4. Textbook of Biopharmaceutics and Pharmacokinetics, Dr. Shobha Rani R. Hiremath, Prism Book
5. Pharmacokinetics by Milo Gibaldi and D. Perrier, 2nd edition, Marcel Dekker Inc., New York, 1982
6. Current Concepts in Pharmaceutical Sciences: Biopharmaceutics, Swarbrick. J, Lea and Febiger, Philadelphia, 1970
7. Clinical Pharmacokinetics, Concepts and Applications 3rd edition by Malcolm Rowland and Thom~ N. Tozer, Lea and Febiger, Philadelphia, 1995
8. Dissolution, Bioavailability and Bioequivalence, Abdou. H.M, Mack Publishing Company, Pennsylvania 1989
9. Biopharmaceutics and Clinical Pharmacokinetics, An Introduction, 4th edition, revised and expanded by Robert. E. Notari, Marcel Dekker Inc, New York and Basel, 1987.
10. Biopharmaceutics and Relevant Pharmacokinetics by John. G Wagner and M. Pamarowski, 1st edition, Drug Intelligence Publications, Hamilton, Illinois, 1971.
11. Encyclopedia of Pharmaceutical Technology, Vol 13, James Swarbrick, James. G. Boylan, Marcel Dekker Inc, New York, 1996.
12. Basic Pharmacokinetics, 1st edition, Sunil S Jambhekar and Philip J Breen, pharmaceutical press, RPS Publishing, 2009.
13. Absorption and Drug Development- Solubility, Permeability, and Charge State, Alex Avdeef, John Wiley & Sons, Inc, 2003.

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**FORMULATION AND EVALUATION OF FLOATING MATRIX TABLETS OF
ASPIRIN BY USING GARLIC PEEL POWDER**

Dissertation submitted to

Jawaharlal Nehru Technological University, Kakinada, A.P.



In partial fulfillment of the Requirement for the Award of the

Degree of

MASTER OF PHARMACY

IN

PHARMACEUTICS

By

NARRA SRI BHAVYA

(RegNO.213G1S0301)

Under the guidance of

DR.CH. S. PHANI KUMAR M.PHARM Ph.D

Professor



DEPARTMENT OF PHARMACEUTICS

ADITYA PHARMACY COLLEGE

SURAMPALEM- 533437

2021-2023



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Pin: 533437, ph: 08852

CERTIFICATE

This is to certify that the dissertation work entitled "Formulation and evaluation of Aspirin floating matrix tablets using Garlic peel powder" is submitted to the JNTUK University, Kakinada in partial fulfillment for the award of the degree of

PHARMACY. This is a bonafied work carried out By
NARRA SRI BHAVYA (Regd No: 213G1S0301) under the guidance of
DR. CH.S. PHAN KUMAR Professor Aditya Pharmacy College, Surampalem.

Place: Surampalem

Date:

Dr. D SATISH KUMAR M. pharm, Ph.D

Principal and professor

Aditya Pharmacy College

PRINCIPAL

Aditya Pharmacy College

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Pin: 533437, Ph: 08852200005.

CERTIFICATE

This is to certify that the dissertation work entitled **Formulation and evaluation of floating matrix tablets of Aspirin by using Garlic peel powder** is submitted to the JNTUK University, Kakinada in partial fulfilment for the award of the degree of **Master of pharmacy in pharmaceuticals**. This is bonafied work carried out by **NARRA SRI BHAVYA** (RegdNo.213G1S0301) under guidance of **DR.CH. S. PHANI KUMAR**, professor, Aditya pharmacy college, Surampalem.

Place: Surampalem

Date: 04-04-2024

Guide

DR.CH.S PHANI KUMAR
M.PHARM, Ph.D.
Professor



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EVALUATION CERTIFICATE

This is to certify that the dissertation work entitled FORMULATION AND EVALUATION OF FLOATING MATRIX TABLETS OF ASPIRIN BY USING GARLIC PEEL POWDER is submitted to the Jawaharlal Nehru technological university, Kakinada in partial fulfilment for the award of the degree of ~~Master of Pharmacy in Pharmaceutical Sciences~~. This is bonified work carried out by NARRA SRI BHAVYA (REGD: 213G1S0301) under the guidance and supervision of DR.CH.S. PHANI KUMAR professor, Aditya Pharmacy College, surampalem.

Place: Surampalem

Date:


SIGNATURE OF EVALUATOR 1


SIGNATURE OF EVALUATOR 2



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DECLARATION

I, NARRA SRI BHAVYA (Regd No: 213G1S0301), do hereby declare that the dissertation entitled "FORMULATION AND EVALUATION OF FLOATING MATRIX TABLETS OF ASPIRIN BY USING GARLIC PEEL POWDER" is a record of genuine research work carried out by me under the supervision of DR. CH. S. PHANI KUMAR, Professor, Aditya Pharmacy College, Surampalem. The work reported herein has not been previously submitted by other persons for qualifications at any other University or academic institutions unless otherwise referenced or acknowledged.

Place: Surampalem

Date: 04-04-2024



NARRA SRI BHAVYA

Regd No - 213G1S0301



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CONCLUSION

By constructing the standard calibration curve for Aspirin of fig. 7.0 in 0.1N HCl Buffer at concentration 2-10 μ g/ml. It was observed that analytical method use obeying beers lambert's law by showing R^2 value = 0.997 as shown hence the analytical method was used to determine that concentration present in various solutions used for analysis.

Drug and excipient compatibility studies to choose various excipients a long with drug, the drug and excipient compatibility'was performed and found that, all the excipients involved in these studies hence all the excipients can be considered for the preparation of various Aspirin floating matrix tablets. The drug excipient compatibility studies were performed for Aspirin, garlic peel powder and HPMC at their highest concentration at a ratio how they used in designing of tablet formulation.

The flow properties for Aspirin were conducting and found Aspirin with Good flow properties by having Angle of repose 28.52°, bulk density 0.372g/ml, tapped density at 0.435g/ml, cars index 11.92% and Hausner's ratio at 1.135 as shown in table 7.2 hence aspirin can be tableted by direct compression method of its flow properties.

The tablets were designed 12%, 16% and 20%w/w with help of garlic peel powder plus garlic peel powder and HPMC and all formulations were subjected to the pre- compression studies and found all the formulations with God flow properties. hence all formulations can be tableted by using direct compression method because of their good flow properties.



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F1, F2, F3 were prepared with the help of garlic peel powder at 12%w/w, 16%w/w, 20%w/w per tablet. The rate release retardant is high for F3 Formulation were in following order

F3>F2>F1

F4, F5, F6 were prepared with help of HPMC at 12%w/w, 16%w/w, 20%w/w per tablet. The rate release retardant is high for F6 formulation and release retardation for HPMC powder formulation were in following order.

F6>F5>F4

F7, F8, F9, F10 were prepared with help of garlic peel powder and HPMC at 12%w/w, 16%w/w, 20%w/w per tablet. The rate release retardation is high for F10 formulation and release retardation for garlic peel powder and HPMC formulation following order.

F10>F9>F8>F7

Finally, it was found that F10 formulation is best formulation among all Aspirin floating matrix formulation for its high-rate release retardation. It was compared with pure drug and found F10 is having 1.2-fold more *in-vitro* drug release profile to pure drug at the end of 60th minute.



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DRUG DELIVERY SYSTEMS

(MPH 102T)

SCOPE

This course is designed to impart knowledge on the area of advances in novel drug delivery systems.

OBJECTIVES

Upon completion of the course, student shall be able to understand

The various approaches for development of novel drug delivery systems.

The criteria for selection of drugs and polymers for the development of delivering system

The formulation and evaluation of Novel drug delivery systems..

THEORY

60 Hrs

1. Sustained Release(SR) and Controlled Release (CR) 10 Hrs
formulations: Introduction & basic concepts, advantages/disadvantages, factors influencing, Physicochemical & biological approaches for SR/CR formulation, Mechanism of Drug Delivery from SR/CR formulation. Polymers: introduction, definition, classification, properties and application Dosage Forms for Personalized Medicine: Introduction, Definition, Pharmacogenetics, Categories of Patients for Personalized Medicines: Customized drug delivery systems, Bioelectronic Medicines, 3D printing of pharmaceuticals, Telepharmacy.
- 2 Rate Controlled Drug Delivery Systems: Principles & 10 Hrs
Fundamentals, Types, Activation; Modulated Drug Delivery Systems; Mechanically activated, pH activated, Enzyme activated, and Osmotic activated Drug Delivery Systems Feedback regulated Drug Delivery Systems; Principles & Fundamentals.
- 3 Gastro-Retentive Drug Delivery Systems: Principle, concepts 10 Hrs
advantages and disadvantages, Modulation of GI transit time approaches to extend GI transit. Buccal Drug Delivery Systems: Principle of muco adhesion, advantages and disadvantages, Mechanism of drug permeation, Methods of formulation and its evaluations.
- 4 Ocular Drug Delivery Systems: Barriers of drug permeation, 06 Hrs
Methods to overcome barriers.




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|---|--|--------|
| 5 | Transdermal Drug Delivery Systems: Structure of skin and barriers, Penetration enhancers, Transdermal Drug Delivery Systems, Formulation and evaluation. | 10 Hrs |
| 6 | Protein and Peptide Delivery: Barriers for protein delivery. Formulation and Evaluation of delivery systems of proteins and other macromolecules. | 08 Hrs |
| 7 | Vaccine delivery systems: Vaccines, uptake of antigens, single shot vaccines, mucosal and transdermal delivery of vaccines. | 06 Hrs |

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2. Robinson, J. R., Lee V. H. L, Controlled Drug Delivery Systems, Marcel Dekker, Inc., New York, 1992.
3. Encyclopedia of controlled delivery, Editor- Edith Mathiowitz, Published by WileyInterscience Publication, John Wiley and Sons, Inc, New York! Chichester/Weinheim
4. N.K. Jain, Controlled and Novel Drug Delivery, CBS Publishers & Distributors, New Delhi, First edition 1997 (reprint in 2001).
5. S.P.Vyas and R.K.Khar, Controlled Drug Delivery - concepts and advances, Vallabh Prakashan, New Delhi, First edition 2002

JOURNALS

1. Indian Journal of Pharmaceutical Sciences (IPA)
2. Indian drugs (IDMA)
3. Journal of controlled release (Elsevier Sciences) desirable
4. Drug Development and Industrial Pharmacy (Marcel & Decker) desirable



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FORMULATION, EVALUATION AND IN-VITRO CHARACTERIZATION OF LACOSAMIDE LOADED CHITOSAN NANO PARTICLES FOR BREAST CANCER TREATMENT

Dissertation submitted to
Jawaharlal Nehru Technological University, Kakinada, A.P



In Partial Fulfilment of the Requirement for the Award of the Degree

MASTER OF PHARMACY

In

PHARMACEUTICS

By

PECHETTI SAIKIRAN

(Regd no-213G1S0302)

Under the guidance of

Mr. T. Uday Kumar M. Pharm,Ph. D
Assoc. professor



Department of Pharmaceutics

Aditya Pharmacy College

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2021-2023

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**FORMULATION, EVALUATION AND IN-VITRO
CHARACTERIZATION OF LACOSAMIDE LOADED
CHITOSAN NANO PARTICLES FOR BREAST CANCER
TREATMENT**

Dissertation submitted to
Jawaharlal Nehru Technological University, Kakinada, A.P



In Partial Fulfilment of the Requirement for the Award of the Degree of

MASTER OF PHARMACY

In

PHARMACEUTICS

Submitted by

PECHETTI SAIKIRAN

(Regd no-213G1S0302)

Under the guidance of

Mr. T. Uday Kumar M. Pharm, Ph. D
Assoc. professor



Department of Pharmaceutics

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Surampalem-533437

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2021-2023

14



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university, Kakinada)

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E.G. Dist., A.P. Pin: 533437, Ph.: 08852 200005

CERTIFICATE

This is to certify that the dissertation work entitled "FORMULATION, EVALUATION AND IN-VITRO CHARACTERIZATION OF LACOSAMIDE LOADED CHITOSAN NANO PARTICLES FOR BREAST CANCER TREATMENT." is submitted to the JNTU university, Kakinada in partial fulfilment for the award of the degree of **Master of Pharmacy in Pharmaceutics**. This is a benefited work carried out by **PECHETTI SAIKIRAN** (Regd No: 213G1S0302) under the guidance of Mr. T. Uday Kumar M.Pharm, Ph.D, Associate Professor Aditya Pharmacy College, Surampalem.

Place: Surampalem

Dr. D. SATHIS KUMAR M. Pharm, Ph. D

Date:



Principal and Professor,
Aditya Pharmacy College,
Aditya Pharmacy College,
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Place: Surampalem.

Date: 4/4/24



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T. Uday Kumar
Guide 4/4/24

Mr. T. Uday Kumar M. Pharm, Ph. D
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EVALUATION CERTIFICATE

This is to certify that the dissertation work entitled “**FORMULATION, EVALUATION AND IN-VITRO CHARACTERIZATION OF LACOSAMIDE LOADED CHITOSAN NANO PARTICLES FOR BREAST CANCER TREATMENT.**” is submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfilment for the award of the degree of **Master of Pharmacy in Pharmaceutics**. This is a benefited work carried out by **PECHETTI SAIKIRAN** (Regd No: **213G1S0302**) under the guidance and supervision of Mr. T. Uday Kumar M.Pharm, Ph.D, Associate Professor, Aditya Pharmacy college, Surampalem.

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Date:

SIGNATURE OF EVALUATOR 1

SIGNATURE OF EVALUATOR 2



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DECLARATION

I, PECHETTI SAIKIRAN (Regd No:213G1S0302), do here by declare that the dissertation entitled "FORMULATION, EVALUATION AND IN-VITRO CHARACTERIZATION OF LACOSAMIDE LOADED CHITOSAN NANO PARTICLES FOR BREAST CANCER TREATMENT." is a record of genuine research work carried out by me under the supervision of Mr. T. Uday Kumar, M.Pharm, Ph.D, **Associate Professor**, Aditya Pharmacy College, Surampalem. The work reported here in has not been previously submitted by other persons for qualifications at any other University or academic institutions unless otherwise referenced or acknowledged.

Place: Surampalem
Date: 04-Apr-2024

P. Sai Kiran

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SUMMARY AND CONCLUSION

Intravenous drug delivery system enhances the permeability of the drug molecules. Thus, by incorporating of drug into nanoparticles and delivery through the intravenous route by significantly improve the bioavailability of Lacosamide loaded chitosan nano particles.

- From the present study, standard calibration curve was plotted shows best fit line with regression (R^2)0.9957 which obeys Beer's lambert law.
- The FT-IR studies was carried out and results shown that there is no interaction pf API with excipients used in formulations.
- The zeta sizer shoes particle size of LCS -Ch-NPs formulation shows greater transmittance indicate smaller particle size was found to 241.5 nm.
- The percentage drug content of LCS-Ch -NPs was found to be 45.5%.
- The entrapment efficiency of LCS-Ch-NPs was found to be 97%.
- In present study the drug release studies were carried out by dialysis membrane. The drug release of LCS-Ch-NPs formulation gave better release than pure LCS.

The formulation that shows 80-90% of drug release in 24hrs and it shows more impact in endocytosis.

- In XRD diffraction pattern of LCS shows as crystalline nature with sharp intense peak value of 2θ was found to be 25° .
- The DSC thermogram of LCS shows crystalline and sharp endothermic peak at melting point of 190°C - 200°C .



- The effect of LCS and LCS-Ch-NPs treatment on CELL TOXICITY OF IC_{50} of LCS-Ch-NPs shows more potential activity as compared to LCS.

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PHARMACEUTICS PRACTICAL - I

(MPH 105PA)

1. Analysis of pharmacopoeial compounds and their formulations by UV Vis spectrophotometer
2. Simultaneous estimation of multi component containing formulations by UV spectrophotometry
3. Experiments based on HPLC
4. Experiments based on Gas Chromatography
5. Estimation of riboflavin/quinine sulphate by fluorimetry
6. Estimation of sodium/potassium by flame photometry
7. To carry out preformulation studies of tablets.
8. To study the effect of compressional force on tablets disintegration time.
9. To study Micromeritic properties of powders and granulation.




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No. of Experiments Attended 13

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16
18/2
Examiner-2

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Painter

S.No.	Date	Name of the Experiment	Page No.	Remarks
		INTRODUCTION	1 - 04	
1	10/11/23	Assay of Paracetamol using $A_{1\%}^{1\text{cm}}$ method	5 - 06	8/17/23
2	17/11/23	Assay of salicylic acid using Direct comparison method (vs) using single point method	07 - 08	8/24/23
3	14-11-23	Assay of Sulphacetamide sodium eye drops by colorimetry	09 - 11	8/24/23
4	24/11/23	Assay of furosemide	12 - 14	8/24/23
5	20/11/23	Simultaneous estimation of sodium benzoate Caffeine by simultaneous equation method	15 - 17	8/29/23
6	29/12/23	Assay of Sodium Ions by flame photometry	18 - 19	7/12/24
7	29/12/23	Assay of potassium ions by flame photometry	20 - 21	7/12/24
8	22/12/23	Estimation of Riboflavin by fluorimetry	22 - 23	7/12/24
9	12/1/24	Experiment based on H.P.L.C	24	7/12/24
10	22/1/24	Experiment based on Gas Chromatography	25 - 26	7/12/24
		INTRODUCTION	27 - 30	

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Painter

S.No.	Date	Name of the Experiment	Page No.	Remarks
11	27/01/24	To carry out preformulation studies of Tablet	31-32	} Tw 29/1 Tw 1/2 Tw 5/2
12	29/01/24	To study the effect of compression force on Tablet disintegration Time	33-34	
13	02/02/24	To study micromeritic properties of powder and granules	35-37	

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24.

PHARMACEUTICS PRACTICAL - II

(MPH 105PB)

1. To study the effect of particle size on dissolution of a tablet.
2. To study the effect of binders on dissolution of a tablet.
3. To plot Heckal plot, Higuchi and peppas plot and determine similarity factors.
4. To perform In-vitro dissolution profile of CR/ SR marketed formulation
5. Formulation and evaluation of sustained release matrix tablets
6. Formulation and evaluation osmotically controlled DDS
7. Preparation and evaluation of Floating DDS- hydro dynamically balanced DDS
8. Formulation and evaluation of Muco adhesive tablets.
9. Formulation and evaluation of trans dermal patches.




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No. of Experiments Conducted 09

No. of Experiments Attended 09


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Signature-Head of the Department

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Examiner-1


Examiner-2

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Painter

S.No.	Date	Name of the Experiment	Page No.	Remarks
		INTRODUCTION	01-02	Pr
1	7/11/23	To study the effect of particle size on dissolution of Tablets	03-06	Pr
2	17/11/23	To study the effect of binder on dissolution of Tablet	07-10	Pr
3	24/11/23	To plot Hareket plot, Higuchi and Peppas plot and determine similarity factor	11-13	Pr
4	28/11/23	To perform In-vitro dissolution profile of C.R / S.R marketed formulations	14-17	Pr
5	01/12/23	Formulation and Evaluation of sustained release matrix tablets	18-20	Pr
6	15/12/23	Formulation and Evaluation of osmotically controlled Drug Delivery system	21-24	Pr
7	22/12/23	Preparation and evaluation of floating Drug Delivery system	25-28	Pr
8	05/01/24	Formulation and evaluation of muco adhesive Tablets	29-32	Pr
9	12/01/24	Formulation and Evaluation of Transdermal Patches	33-36	Pr

PHARMACEUTICS PRACTICAL - III

(MPH 205PA)

1. To study the effect of temperature change, non solvent addition, incompatible polymer addition in microcapsules preparation
2. Preparation and evaluation of Alginate beads
3. Formulation and evaluation of gelatin /albumin microspheres
4. Formulation and evaluation of liposomes/niosomes
5. Formulation and evaluation of spherules
6. Improvement of dissolution characteristics of slightly soluble drug by Solid dispersion technique.
7. Comparison of dissolution of two different marketed products /brands
8. Protein binding studies of a highly protein bound drug & poorly protein bound drug
9. Bioavailability studies of Paracetamol in animals.
10. Pharmacokinetic and IVIVC data analysis by Winnoline^R software
11. In vitro cell studies for permeability and metabolism



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No. of Experiments Conducted 10

No. of Experiments Attended 10

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Examiner-1

Examiner-2

Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1	05/03/24	Study the Improvement in dissolution characteristics of salicylic acid by solid dispersion technique (Solvent Evaporation)	01 - 04	Phani
2	14/03/24	Study the Improvement in dissolution characteristics of salicylic acid by solid dispersion technique (Co-grinding)	05 - 08	Phani
3	26/03/24	preparation & Evaluation of Ibuprofen alginate beads	09 - 12	Phani
4	04/04/24	formulation & Evaluation of cyclohexane microspheres	13 - 17	Phani
5	30/04/24	formulation & Evaluation of albumin microspheres	18 - 22	Phani
6	09/05/24	study of protein binding of salicydic acid. A strong protein bound drug	23 - 25	Phani
7	06/06/24	Comparative protein binding studies of salicydic acid with Egg albumin	26 - 28	Phani
8	18/06/24	Diffusion studies of salicydic acid from ointment using a semi-permeable membrane	29 - 31	Phani


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Painter

S.No.	Date	Name of the Experiment	Page No.	Remarks
9	27/06/24	To construct the calibration curve of salicylic acid using colorimeter	32 - 33	Phen
10	11/07/24	To construct the calibration curve of Ibuprofen using U.V - spectrophotometer	34 - 35	Phen


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PHARMACEUTICS PRACTICAL - IV (MPH 205PB)

1. DoE Using Design Expert® Software
2. Formulation data analysis Using Design Expert® Software
3. Quality-by-Design in Pharmaceutical Development
4. Computer Simulations in Pharmacokinetics and Pharmacodynamics
5. Computational Modeling Of Drug Disposition
6. To develop Clinical Data Collection manual
7. To carry out Sensitivity Analysis, and Population Modeling.
8. Development and evaluation of Creams
9. Development and evaluation of Shampoo and Toothpaste base
10. Formulation Development of Multi Vitamin Syrup
11. Use of Optimization techniques in Formulation Development of Tablets




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No. of Experiments Attended 11

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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1	15/03/24	Overview About "DoE" using design Expert software	01 - 06	<u>W</u> (A)
2	22/03/24	formulation Data analysis using Design Expert software	07 - 09	<u>W</u> (A)
3	11/04/24	Quality by design in pharmaceutical development	10 - 11	<u>W</u> (A)
4	28/04/24	computer simulation pharmacodynamics using extra bod apparatus	12 - 13	<u>W</u> (A)
5	12/04/24	formulation and Evaluation of cold cream	14 - 15	<u>W</u> (A+)
6	19/04/24	formulation and Evaluation of vanishing cream	16 - 17	<u>W</u> (A+)
7	26/04/24	formulation and Evaluation of Shampoo	18 - 19	<u>W</u> (A+)
8	03/05/24	formulation and Evaluation of Tooth paste	20 - 21	<u>W</u> (A+)
9	06/05/24	cosmetics formulation used to overcome various medical problems	22 - 25	<u>W</u> (A)


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S.No.	Date	Name of the Experiment	Page No.	Remarks
10	7/05/24	Development of clinical data collection manual	28-29	<u>Two</u> (A)
11	10/5/24	Development and Evaluation of multipurpose herbal cream	30-32	<u>Two</u> (D)


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PHARMACEUTICAL ANALYSIS PRACTICAL - I
(MPA 105PA)

1. Calibration of glasswares
2. Calibration of pH meter
3. Calibration of UV-Visible spectrophotometer
4. Calibration of FTIR spectrophotometer
5. Calibration of GC instrument
6. Calibration of HPLC instrument
7. Cleaning validation of any one equipment
8. Impurity profiling of drugs
9. Assay of official compounds by different titrations
10. Assay of official compounds by instrumental techniques.
11. Estimation of riboflavin/quinine sulphate by fluorimetry
12. Estimation of sodium/potassium by flame photometry
13. Quantitative determination of hydroxyl group.
14. Quantitative determination of amino group
15. Colorimetric determination of drugs by using different reagents




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Advanced Pharmaceutical
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No. of Experiments Attended 21

Signature - Faculty incharge

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Examiner-1

Examiner-2

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SURAMPALEM-533 437



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S.No.	Date	Name of the Experiment	Page No.	Remarks
0.		Introduction.	1 - 5	8/6/23
1.	6/11/23	Calibration of glass ware.	6 - 9	8/7/23
2.	6/11/23	Calibration of pH meter	10 - 11-2	8/7/23
3.	7/11/23	Calibration of U.V visible Spectrophotometer	12 - 15	8/7/23
4.	10/11/23	Assay of paracetamol using A_{1cm} method	16 - 18	8/14/23
5.	14/11/23	Assay of salicylic acid using Direct comparison (or) single point method.	19 - 21	8/17/23
6.	17/11/23	Assay of sulphacetamide sodium eye drops by colorimetry.	22 - 24	8/20/23
7.	20/11/23	Simultaneous estimation of caffeine, sodium benzoate using simultaneous estimation method.	25 - 27	8/23/23
8.	23/11/23	Assay of paracetamol using oxidation and chelation reaction.	28 - 29	8/24/23
9.	24/11/23	Assay of furosemide	30 - 32	8/27/23
10.	27/11/23	Assay of Ascorbic acid using single point standardization method	33 - 34	8/15/23
11.	1/12/23	Estimation of salbutamol using Folin - ciocalteu reagent.	35 - 37	8/15/23
12.	15/12/23	Assay of Ascorbic acid	38 - 40	8/18/23
13.	18/12/23	Assay of magnesium sulphate	41 - 43	8/23/23
14.	23/12/23	Estimation of Riboflavin by fluorimetry.	44 - 46	8/29/23
15.	29/12/23	Estimation of sodium ion by flame photometry.	47 - 48	8/31/23

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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
16.	29/12/23	Estimation of potassium ion concentration of flame photometry.	49-50	8/11/24
17.	5/1/24	quantitative determination of hydroxyl group.	51-53	8/11/24
18.	8/1/24	quantitative determination of amino group.	54-56	8/11/24
19.	12/1/24	calibration of HPLC	57-69	8/11/24
20.	22/1/24	calibration of GC	70-72	8/11/24
21.	29/1/24	Interpretation of IR Spectra	73-76	8/11/24

2nd time

8/11/24



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PHARMACEUTICAL ANALYSIS PRACTICAL - II

(MPA 105PB)

1. Analysis of Pharmacopoeial compounds and their formulations by UV Vis spectrophotometer
2. Simultaneous estimation of multi component containing formulations by UV spectrophotometry
3. Experiments based on HPLC
4. Experiments based on Gas Chromatography
5. Determination of total reducing sugar
6. Determination of proteins
7. Determination of saponification value, Iodine value, Peroxide value, Acid value in food products
8. Determination of fat content and rancidity in food products
9. Analysis of natural and synthetic colors in food
10. Determination of preservatives in food
11. Determination of pesticide residue in food products
12. Analysis of vitamin content in food products
13. Determination of density and specific gravity of foods
14. Determination of food additives



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Advanced Analysis-II
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No. of Experiments Conducted 21

No. of Experiments Attended 21

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Examiner-1

Examiner-2

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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
	7/11/23	Introduction	1	✓
1.	7/11/23	Assay of Salicylic acid using direct comparison or single point method.	2-4	
2.	9/11/23	Assay of Salicylic acid using double point standardization method	5-8	✓
3.	14/11/23	Assay of paracetamol using λ_{max} (or) Specific absorbance method.	9-11	✓
4.	16/11/23	Assay of paracetamol using chemical derivatization method.	12-13	✓
5.	21/11/23	Construction of calibration curve for paracetamol using double beam Spectrophotometer.	14-16	✓
6.	23/11/23	Assay of Sulphacetamide Sodium in eye drops by using colorimetry	17-19	✓
7.	28/11/23	Simultaneous estimation of caffeine Sodium benzoate by simultaneous equation method.	20-23	✓
8.	30/11/23	Assay of Furosemide	24-26	✓
9.	19/12/23	Determination of Acid value of oil.	27-29	✓

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S.No.	Date	Name of the Experiment	Page No.	Remarks
10	21/12/23	Determination of Saponifica- -tion value of oil.	30-32	AF
11.	26/12/23	Determination of iodine value of oil.	33-35	AF
12.	28/12/23	Determination of peroxide value of oil.	36-38	AF
13.	28/12/23	Estimation of acidity of edible oil.	39-40	AF
14.	2/1/24	Estimation of fat content in food products	41-43	AF
15.	4/1/24	Determination of total reducing sugars.	44-45	AF
16.	9/1/24	Determination of proteins by Using Spectrophotometric method.	46-48	AF
17.	9/1/24	TLC Method for isolation & configuration of oil Soluble colour	49-51	AF
18.	23/1/24	Determination of density, relative density, Specific gravity of foods	52-54	AF
19.	23/1/24	Determination of preserva- -tives in foods	55-56	AF
20.	25/1/24	Calibration of HPLC	57-70	AF
21	30/1/24	Calibration of Gas chromatography	71-74	AF

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PHARMACEUTICAL ANALYSIS PRACTICAL - III

(MPA 205PA)

1. Comparison of absorption spectra by UV and Wood ward – Fiesure rule
2. Interpretation of organic compounds by FT-IR
3. Interpretation of organic compounds by NMR
4. Interpretation of organic compounds by MS
5. Determination of purity by DSC in pharmaceuticals
6. Identification of organic compounds using FT-IR, NMR, CNMR and Mass spectra
7. Bio molecules separation utilizing various sample preparation techniques and Quantitative analysis of components by gel electrophoresis.
8. Bio molecules separation utilizing various sample preparation techniques and Quantitative analysis of components by HPLC techniques.
9. Isolation of analgesics from biological fluids (Blood serum and urine).
10. Protocol preparation and performance of analytical / Bioanalytical method validation.
11. Protocol preparation for the conduct of BA/BE studies according to guidelines.




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No. of Experiments Attended 14

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Submitted for the practical examination held on 26/7/24

Examiner-1

Examiner-2

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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	4/3/24	Comparison of absorption spectra of Aspirin & Sodium benzoate by UV & wood ward Fieser rule	1-8	7/5/24
2	15/3/24	Comparison of absorption Spectra of Salicylic acid and paracetamol by UV & wood ward Fieser rule	9-11	7/2/24
3	22/3/24	Interpretation of organic compounds by FT-IR	12-14	7/5/24
4	1/4/24	Interpretation of organic compounds by ^1H - NMR	15-19	7/5/24
5	8/4/24	Interpretation of organic compounds by ^{13}C - NMR	20-23	7/5/24
6	15/4/24	Interpretation of organic compounds by DEPT spectra	24-27	7/29/24
7.	26/4/24	Interpretation of organic compounds by cosy spectra	28-31	7/29/24
8.	29/4/24	Interpretation of organic compounds by Mass spectra	32-36	7/5/24

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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
9.	6/5/24	Distinguish between pentan-2-one and pentan-3-one compounds by Mass spectra	37-40	5/5/24
10.	3/6/24	Identification of organic compounds using FT-IR, ^1H -NMR, ^{13}C -NMR & Mass spectra.	41-47	5/10/24
11.	10/6/24	Determination of purity by DSC in pharmaceuticals	48-50	5/24/24
12.	14/6/24	Isolation of analgesics from biological fluids	51-53	5/28/24
13.	24/6/24	Protocol preparation for Analytical Method validation	54-69	5/28/24
14.	28/6/24	Designing and protocol of Bioequivalence studies as per CDSCO	70-75	5/31/24

Completed
5/31/24

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PHARMACEUTICAL ANALYSIS PRACTICAL - IV
(MPA 205PB)

1. In process and finished product quality control tests for tablets, capsules, parenterals and creams
2. Quality control tests for Primary and secondary packing materials
3. Assay of raw materials as per official monographs
4. Testing of related and foreign substances in drugs and raw materials
5. Preparation of Master Formula Record.
6. Preparation of Batch Manufacturing Record.
7. Quantitative analysis of rancidity in lipsticks and hair oil
8. Determination of aryl amine content and Developer in hair dye
9. Determination of foam height and SLS content of Shampoo.
10. Determination of total fatty matter in creams (Soap, skin and hair creams)
11. Determination of acid value and saponification value.
12. Determination of calcium thioglycolate in depilatories



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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of
Pharmaceutical Analysis

Name: *T. Satyasai*

PIN No.

2	3	3	6	1	3	1	6	0	4
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*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. *Thota. Satyasai*

a student of *1st - M. Pharmacy* with Regd. No. *2336131604*

in the *APA - IV* Laboratory during the year *2023-24*

No. of Experiments Conducted

18

No. of Experiments Attended

18

Signature - Faculty incharge

Signature-Head of the Department

Submitted for the practical examination held on *27/07/24*

K. Srinivas
Examiner-1

[Signature]
Examiner-2

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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	5/3/24	Instructions for preparation of Master formula Record	1-7	<i>[Signature]</i> 5/3/24
2.	7/3/24	Instructions for preparation of Batch Manufacturing Report	8-10	<i>[Signature]</i> 12/3/24
3.	12/3/24	Finished products Quality control tests for paracetamol tablets	11-17	<i>[Signature]</i> 19/3/24
4.	19/3/24	finished products Quality control tests for marketed capsules	18-21	<i>[Signature]</i> 21/3/24
5.	21/3/24	Determination of Acid value	22-24	<i>[Signature]</i> 18/4
6.	28/4/24	Determination of saponification value	25-26	<i>[Signature]</i> 18/4
7.	18/4/24	Estimation of Rancidity in Hair oil	27-28	<i>[Signature]</i> 21/5/24
8.	1/5/24	Estimation of Peroxide value in edible oil	29-31	<i>[Signature]</i> 7/5
9.	7/5/24	Determination of SLS content in shampoo	32-33	<i>[Signature]</i> 8/5

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Painter

S.No.	Date	Name of the Experiment	Page No.	Remarks
10.	8/5/24	Determination of foam height in shampoo	34-35	8/5/24
11.	14/5/24	Determination of aryl amine content in hair dye	36-38	8/5/24
12.	5/6/24	Determination developer in hair dye	39-41	8/6/24
13.	11/6/24	Determination of total fatty substance in hair dye cream	42-43	8/12/24
14.	12/6/24	Determination of total fatty substance in bath soap	44-45	8/12/24
15.	18/6/24	Determination of calcium Thioglycolate in Depilatories	46-47	8/19/24
16.	19/6/24	Identification of Related substance by caffeine using Thin layer chromatography	48-49	8/25/24
17.	25/6/24	Quality control of Glass containers as per I.P	50-54	8/26/24
18.	26/6/24	Assay of Ibuprofen using UV-visible spectrophotometer.	55-58.	8/28/24

Second year

2.1 PATHOPHYSIOLOGY (THEORY)

Theory : 3 Hrs. /Week

1. **Scope of the Subject:** This course is designed to impart a thorough knowledge of the relevant aspects of pathology of various conditions with reference to its pharmacological applications, and understanding of basic Pathophysiological mechanisms. Hence it will not only help to study the syllabus of pathology, but also to get baseline knowledge of its application in other subject of pharmacy.
2. **Objectives of the Subject :** Upon completion of the subject student shall be able to –
 - a. describe the etiology and pathogenesis of the selected disease states;
 - b. name the signs and symptoms of the diseases; and
 - c. mention the complications of the diseases.

Text books (Theory)

- a. Pathologic basis of disease by- Cotran, Kumar, Robbins
- b. Text book of Pathology- Harsh Mohan
- c. Text book of Pathology- Y.M. Bhinde

Reference books (Theory)

- a. Clinical Pharmacy and Therapeutics; Second edition; Roger Walker; Churchill Livingstone publication

3. Detailed syllabus and lecture wise schedule :

Chapter

- 1 **Basic principles of cell injury and Adaptation**
 - a) Causes, Pathogenesis and morphology of cell injury
 - b) Abnormalities in lipoproteinaemia, glycogen infiltration and glycogen infiltration and glycogen infiltration and glycogen storage diseases
- 2 **Inflammation**
 - a) Pathogenesis of acute inflammation, Chemical mediators in inflammation, Types of chronic inflammation
 - b) Repairs of wounds in the skin, factors influencing healing of wounds
- 3 **Diseases of Immunity**
 - a) Introduction to T and B cells
 - b) MHC proteins or transplantation antigens
 - c) Immune tolerance
 - Hypersensitivity
Hypersensitivity type I, II, III, IV, Biological significance, Allergy due to food, chemicals and drugs
 - Autoimmunity
Criteria for autoimmunity, Classifications of autoimmune diseases in man, mechanism of autoimmunity, Transplantation and immunologic tolerance, allograft rejections, transplantation antigens, mechanism of rejection of allograft.
 - Acquired immune deficiency syndrome (AIDS)



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FOE OR ALLY: UNRAVELING THE ROLE OF NSAIDS IN
THE FRACTURE HEALING

The thesis work submitted to



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-
KAKINADA

In partial fulfilment for the award of the Degree of
DOCTOR OF PHARMACY

Submitted by

ESHITA LAL	(193G1T0009)
NIRMALYA ROY	(193G1T0015)
KALIGITHI SUNANDA	(193G1T0026)
KONIDENA VENKATA SAI CHARAN	(193G1T0029)

Under the esteemed guidance of

HOSPITAL GUIDE

Dr. P.Surya Prakash Naidu

MBBS, MS(Ortho)FIJR,FOAI

Consultant Orthopaedic & Joint Replacement Surgeon
Trust Multispeciality Hospitals, Kakinada

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Dr. M. Karthik Mohan

Pharm.D

Assistant Professor
Aditya Pharmacy College (A)



DEPARTMENT OF PHARMACY PRACTICE

ADITYA PHARMACY COLLEGE (A)

Accredited by NAAC with 'A' Grade, Affiliated to JNTUK, Approved by AICTE, PCI, UGC & ISO

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DECLARATION

We hereby declare that the thesis entitled "FOE OR ALLY: UNRAVELING THE ROLE OF NSAIDS IN THE FRACTURE HEALING" is a bonafide project work carried out by us under the guidance of Dr. M. Karthik Mohan, Assistant Professor, Aditya Pharmacy College (A) and Dr. P. Surya Prakash Naidu, Consultant Orthopedic and Joint Replacement Surgeon at Trust Multispeciality Hospitals, Kakinada, in partial fulfillment of the requirements for the Award of the Degree of Doctor of Pharmacy in the Department of Pharmacy Practice to Jawaharlal Nehru Technological University-Kakinada (JNTU-K). The work embodied in this thesis is original and has not been submitted in part or in full for any degree of this or any other university.

Place: Surampalem

Date: 01-05-2024

Eshita Lal

Eshita Lal.

Nirmalya Roy

Nirmalya Roy.

Kaligithi Sunanda

K. Sunanda

Konidena Venkata Sai Charan

K.V. Saicharan.



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CERTIFICATE BY THE GUIDES

This is to certify that the thesis work entitled "FOE OR ALLY: UNRAVELING THE ROLE OF NSAIDS IN THE FRACTURE HEALING" is a bonafide Project work carried out by ESHITA LAL (Reg. No. 193GIT0009), NIRMALYA ROY (Reg. No. 193GIT0015), KALIGITHI SUNANDA (Reg. No. 193GIT0026) & KONIDENA VENKATA SAI CHARAN (Reg. No. 193GIT0029), under the guidance of us at the Department of Pharmacy Practice, Aditya Pharmacy College (A), and Dept. of Orthopaedics, Trust Multispeciality Hospitals, Kakinada. In our opinion, this work has reached the standards in fulfillment of the partial requirement for the award of the degree of Doctor of Pharmacy per the regulations of the University.

Place: Surampalem & Kakinada

Date: 01-05-2024

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Consultant Orthopaedic & Joint Replacement Surgeon

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Assistant Professor

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Trust Multispeciality Hospitals

Dr. P. SURYA PRAKASH NAIDU

MS (ORTHO), FIJR (COIMBATORE), FOAI

Consultant Orthopaedic & Joint Replacement Surgeon

Regd. No. 109387

Date:

Time:



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CERTIFICATE BY THE PRINCIPAL

This is to certify that the thesis work entitled, "FOE OR ALLY: UNRAVELING THE ROLE OF NSAIDS IN THE FRACTURE HEALING" is being submitted by ESHITA LAL (Reg. No. 193G1T0009), NIRMALYA ROY (Reg. No. 193G1T0015), KALIGITHI SUNANDA (Reg. No. 193G1T0026) & KONIDENA VENKATA SAI CHARAN (Reg. No. 193G1T0029) to Jawaharlal Nehru Technological University, Kakinada (JNTUK), in partial fulfilment for the award of the degree of DOCTOR OF PHARMACY in the Department of Pharmacy Practice under the guidance of Dr. M. Karthik Mohan, Pharm.D., Assistant Professor, is the bonafide project work carried out by them at Aditya Pharmacy College (A), Surampalem & Trust Multispeciality Hospitals, Kakianda.

The results incorporated in this work have not been submitted to any other university or institute for the award of any degree.

Place: Surampalem

Date:

4/5/24



Dr. D. Sathis Kumar,

M. Pharm, Ph. D.

Principal,

Aditya Pharmacy College (A),

Surampalem-533437

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EVALUATION CERTIFICATE

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Place: Surampalem

Date: 10-05-2024

Internal Examiner

Sign:

External Examiner

Sign:



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The study provides a comprehensive understanding of the fracture healing process across various bones, shedding the light on the intricate stages involved in the bone restoration, it was elucidated that fracture healing follows a sequential pattern, starting from hematoma formation and culminating in bone remodeling.

In conclusion, this study has provided valuable insights into the complex interplay between NSAID use, fracture healing, and pain assessment scores based on radiological examinations across various types of fractures in different body parts. We observed the trends indicating that frequent usage of NSAIDs may be associated with slower healing rates and pain scores variations particularly in certain types of fractures or when administered at higher doses.

Furthermore, our study highlights the importance of ongoing monitoring and assessment throughout the healing process with regular radiological evaluation and pain assessments. Substances ranging from vitamins and minerals to medications and supplements, underscore the complexity of the bone healing process and the diverse array of factors that influence it. Each of these substances plays a distinct role in bone metabolism, tissue repair, and overall bone health.



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4.2 HOSPITAL PHARMACY (THEORY)

Theory : 2 Hrs. /Week

1. **Scope:** In the changing scenario of pharmacy practice in India, for successful practice of Hospital Pharmacy, the students are required to learn various skills like drug distribution, drug dispensing, manufacturing of parenteral preparations, drug information, patient counselling, and therapeutic drug monitoring for improved patient care.
2. **Objectives:** Upon completion of the course, the student shall be able to –
 - a. know various drug distribution methods;
 - b. know the professional practice management skills in hospital pharmacies;
 - c. provide unbiased drug information to the doctors;
 - d. know the manufacturing practices of various formulations in hospital set up;
 - e. appreciate the practice based research methods; and
 - f. appreciate the stores management and inventory control.

Text books: (latest editions)

- a. Hospital pharmacy by William .E. Hassan
- b. A text book of Hospital Pharmacy by S.H.Merchant & Dr. J.S. Qadry. Revised by R.K.Goyal & R.K. Parikh

References:

- a. WHO consultative group report.
- b. R.P.S. Vol.2. Part –B; Pharmacy Practice section.
- c. Handbook of pharmacy – health care. Edt. Robin J Harman. The Pharmaceutical press.

3. Lecture wise programme :

Topics

- 1 **Hospital - its Organisation and functions**
- 2 **Hospital pharmacy-Organisation and management**
 - a) Organizational structure-Staff, Infrastructure & work load statistics
 - b) Management of materials and finance
 - c) Roles & responsibilities of hospital pharmacist
- 3 **The Budget – Preparation and implementation**
- 4 **Hospital drug policy**
 - a) Pharmacy and Therapeutic committee (PTC)
 - b) Hospital formulary
 - c) Hospital committees
 - Infection committee
 - Research and ethical committee
 - d) developing therapeutic guidelines
 - e) Hospital pharmacy communication - Newsletter



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**A PROSPECTIVE OBSERVATIONAL STUDY ON
UNVEILING THE CONVENTIONAL AND
UNCONVENTIONAL RISK FACTORS IN MYOCARDIAL
INFARCTION PATIENTS AT A TERTIARY CARE
HOSPITAL.**

The thesis work submitted to



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-
KAKINADA**

*In partial fulfillment for the award of the Degree of
DOCTOR OF PHARMACY*

Submitted by

BATHULA AMULYA	(193G1T0003)
DHANDUPROLU SATISH	(193G1T0007)
LALAM MOUNIKA	(193G1T0013)
KALLEPALLI DEEVENA DAS	(193G1T0027)

Under the esteemed guidance of

HOSPITAL GUIDE	INSTITUTIONAL GUIDE
Dr. B. D. PAVAN KUMAR	Dr. J. BHARGAVA NARENDRA
MBBS, MD, DM, AFESC	PharmD
Interventional cardiologist	Assistant Professor
Trust Multispeciality Hospitals, Kakinada	Aditya Pharmacy College (A)



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DECLARATION

We hereby declare that the thesis entitled *A PROSPECTIVE OBSERVATIONAL STUDY ON UNVEILING THE CONVENTIONAL AND UNCONVENTIONAL RISK FACTORS IN MYOCARDIAL INFARCTION PATIENTS AT A TERTIARY CARE HOSPITAL* is a bonafide project work carried out by us under the guidance of *Dr. J. BHARGAVA NARENDRA, Assistant professor, Aditya Pharmacy College (A)* and *Dr. B. D. PAVAN KUMAR, Interventional cardiologist and physician at Trust Multispecialty Hospitals, Kakinada*, in partial fulfillment of the requirements for the Award of the Degree of Doctor of Pharmacy in the Department of Pharmacy Practice to Jawaharlal Nehru Technological University-Kakinada (JNTU-K). The work embodied in this thesis is original and has not been submitted in part or in full for any degree of this or any other university.

Place: Surampalem

Date: 06-05-2024

Bathula Amulya

Dhanduprolu Satish

Lalam Mounika

Kallepalli Deevana Das

B. Amulya

D. Satish

L. Mounika

K. Deevana-Das



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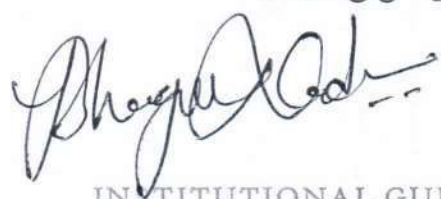
CERTIFICATE BY THE GUIDES

This is to certify that the thesis work entitled, *A PROSPECTIVE OBSERVATIONAL STUDY ON UNVEILING THE CONVENTIONAL AND UNCONVENTIONAL RISK FACTORS IN MYOCARDIAL INFARCTION PATIENTS AT A TERTIARY CARE HOSPITAL* is a bonafide Project work carried out by BATHULA AMULYA (Reg. No. 193G1T0003), DHANDUPROLU SATISH (Reg. No. 193G1T0007), LALAM MOUNIKA (Reg. No. 193G1T0013) & KALLEPALLI DEEVENA DAS (Reg. No. 193G1T0027), under the guidance of us at the Department of Pharmacy Practice, Aditya Pharmacy College (A), and Dept. of Cardiology, Trust Multispeciality Hospitals, Kakinada. In our opinion, this work has reached the standards in fulfillment of the partial requirement for the award of the degree of Doctor of Pharmacy per the regulations of the University.

Place: Surampalem & Kakinada

Date: 06-05-2024

Trust Multispeciality Hospitals
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Interventional Cardiologist
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The results incorporated in this work have not been submitted to any other university or institute for the award of any degree.

Dr. D. Sathis Kumar,
M. Pharm, Ph. D.
Principal,
Aditya Pharmacy College (A),
Surampalem-533437

Place: Surampalem
Date: 6/5/24



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EVALUATION CERTIFICATE

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Place: Surampalem

Date: 14/05/24

Internal Examiner

Sign:

External Examiner

Sign:



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CONCLUSION:

This study highlights several significant findings regarding the conventional and unconventional risk factors. In this context, it describes the relationship between various risk factors of myocardial infarction. So, our study shows that the male category is more prone to myocardial infarction than the female category.

Hypertension is the highest risk in males than females in conventional risk factors. In unconventional risk factors, a family history of CVD is more prone to risk causing myocardial infarction. In this context, we studied and found the relationship between each unconventional risk factor and with conventional risk factor.

In this comparison, 93(66%) patients with hypertension have sleep disturbance with less than 6 hours, and 38(27%) patients observed with hyperlipidemia who have been consuming alcohol for above 10 years.

In this observation, 82(58%) patients with hyperlipidemia observed a family history of CVD.

Furthermore, Dental Caries are observed in populations with hypertension, diabetes mellitus, and hyperlipidemia.



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A handwritten signature in green ink, appearing to be 'PSH'.

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APPENDIX-A

(See regulation 8)

PHARM.D. SYLLABUS

First Year

1.1 HUMAN ANATOMY & PHYSIOLOGY (THEORY)

Theory : 3 Hrs. /Week

1. **Scope and Objectives:** This course is designed to impart a fundamental knowledge on the structure and functions of the human body. It also helps in understanding both homeostasis mechanisms and homeostatic imbalances of various body systems. Since a medicament, which is produced by pharmacist, is used to correct the deviations in human body, it enhances the understanding of how the drugs act on the various body systems in correcting the disease state of the organs.
2. **Upon completion of the course the student shall be able to:**
 - a. describe the structure (gross and histology) and functions of various organs of the human body;
 - b. describe the various homeostatic mechanisms and their imbalances of various systems;
 - c. identify the various tissues and organs of the different systems of the human body;
 - d. perform the hematological tests and also record blood pressure, heart rate, pulse and Respiratory volumes;
 - e. appreciate coordinated working pattern of different organs of each system; and
 - f. appreciate the interlinked mechanisms in the maintenance of normal functioning (homeostasis) of human body

3. Course materials:

Text books

- a. Tortora Gerard J. and Nicholas, P. Principles of anatomy and physiology Publisher Harpercollins college New York.
- b. Wilson, K.J.W. Ross and Wilson's foundations of anatomy and physiology. Publisher: Churchill Livingstone, Edinburg.

Reference books

- a. Guyton arthur, C. *Physiology of human body*. Publisher: Holtsaunders.
- b. Chatterjee, C.C. *Human physiology*. Volume 1&II. Publisher: medical allied agency, Calcutta.
- c. Peter L. Williams, Roger Warwick, Mary Dyson and Lawrence, H.
- d. *Gray's anatomy*. Publisher: Churchill Livingstone, London.



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4. Lecture wise program :

Topics

- 1 Scope of anatomy and physiology, basic terminologies used in this subject
(Description of the body as such planes and terminologies)
- 2 Structure of cell – its components and their functions.
- 3 Elementary tissues of the human body: epithelial, connective, Muscular and nervous tissues-their sub-types and characteristics
- 4 a) Osseous system - structure, composition and functions of the Skeleton. (done in practical classes - 6hrs)
b) Classification of joints, Types of movements of joints and disorders of joints
(Definitions only)
- 5 Haemopoetic System
a) Composition and functions of blood
b) Haemopoiesis and disorders of blood components (definition of disorder)
c) Blood groups
d) Clotting factors and mechanism
e) Platelets and disorders of coagulation
- 6 Lymph
a) Lymph and lymphatic system, composition, formation and circulation.
b) Spleen: structure and functions, Disorders
c) Disorders of lymphatic system (definition only)
- 7 Cardiovascular system
a) Anatomy and functions of heart
b) Blood vessels and circulation (Pulmonary, coronary and systemic circulation)
c) Electrocardiogram (ECG)
d) Cardiac cycle and heart sounds
e) Blood pressure – its maintenance and regulation
f) Definition of the following disorders
Hypertension, Hypotension, Arteriosclerosis, Atherosclerosis, Angina, Myocardial infarction, Congestive heart failure, Cardiac arrhythmias
- 8 Respiratory system
a) Anatomy of respiratory organs and functions
b) Mechanism / physiology of respiration and regulation of respiration
c) Transport of respiratory gases
d) Respiratory volumes and capacities, and Definition of: Hypoxia, Asphyxia, Dybarism, Oxygen therapy and resuscitation.
- 9 Digestive system
a) Anatomy and physiology of GIT
b) Anatomy and functions of accessory glands of GIT
c) Digestion and absorption
d) Disorders of GIT (definitions only)



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**BEYOND THE PRESCRIPTIONS: ENHANCING
QUALITY OF LIFE AND MEDICATION ADHERENCE
THROUGH PATIENT COUNSELLING IN PATIENTS
WITH CARDIOVASCULAR DISEASE**

The thesis work submitted to



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-
KAKINADA**

*In partial fulfillment of the requirements for the Degree of
DOCTOR OF PHARMACY*

Submitted by

CHIKKALA BHAGYA ARUNA	(193G1T0005)
MANISHA LAHKAR	(193G1T0014)
SONGA PREMCHAND	(193G1T0019)
YOGANANDAM SUHARIKA	(193G1T0025)

Under the esteemed guidance of

HOSPITAL GUIDE

Dr. M. S. Chandramouli

MBBS, MD, DM; (EP Specialist)

Consultant Cardiologist and Electrophys iologist

Trust Multispeciality Hospitals , Kakinada

INSTITUTIONAL GUIDE

Dr. P. S. S. Saikiran

Pharmacology

Associate Professor

Aditya Pharmacy College (A)



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Approved by AICTE, PCI, UGC & ISO

Aditya Nagar, ADB Road, Surampalem-533437, Andhra Pradesh, India

DECLARATION

We hereby declare that the thesis entitled "*BEYOND THE PRESCRIPTIONS: ENHANCING QUALITY OF LIFE AND MEDICATION ADHERENCE THROUGH PATIENT COUNSELLING IN PATIENTS WITH CARDIOVASCULAR DISEASE*" is a bonafide project work carried out by us, under the guidance of *Dr. P. S. S. Sai Kiran, Associate Professor, Aditya Pharmacy College (A)* and *Dr. M. S. Chandra Mouli, EP Specialist, Consultant Cardiologist and Electrophysiologist at Trust Multispecialty Hospitals, Kakinada*, in partial fulfillment of the requirements for the degree of Doctor of Pharmacy in the Department of Pharmacy Practice to Jawaharlal Nehru Technological University-Kakinada (JNTU-K). The work embodied in this thesis is original and has not been submitted in part or in full for any degree of this or any other university.

Place: Surampalem

Date:

Chikkala Bhagya Aruna

Manisha Lahkar

Songa PremChand

Yoganandam Suharika

Ch. Bhagya Aruna

Manisha Lahkar

S. Premchand

Y. Suharika



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CERTIFICATE BY THE GUIDES

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Place: Surampalem & Kakinada

Date: 03-05-24

Dr Chandra Mouli S Manravadi

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This is to certify that the thesis work entitled, "BEYOND THE PRESCRIPTIONS: ENHANCING QUALITY OF LIFE AND MEDICATION ADHERENCE THROUGH PATIENT COUNSELLING IN PATIENTS WITH CARDIOVASCULAR DISEASE" is being submitted by **CHIKKALA BHAGYA ARUNA** (Reg. No. 193G1T0005), **MANISHA LAHKAR** (Reg. No. 193G1T0014), **SONGA PREMCHAND** (Reg. No. 193G1T0019) & **YOGANANDAM SUHARIKA** (Reg. No. 193G1T0025), to Jawaharlal Nehru Technological University, Kakinada (JNTUK), in partial fulfillment of the requirements of the degree of **DOCTOR OF PHARMACY** in the **Department of Pharmacy Practice** under the esteemed guidance of **Dr. D. Sathis Kumar**, Professor & Principal, is the bonafide project work carried out by them at the Department of Pharmacy Practice, Aditya Pharmacy College (A), Surampalem & Trust Multispeciality Hospitals, Kakianda.

The results incorporated in this work have not been submitted to any other university or institute for the award of any degree.

Dr. D. Sathis Kumar,
M. Pharm, Ph. D.
Professor & Principal,
Aditya Pharmacy College (A),
Surampalem- 533437

Place: Surampalem
Date: 3/5/24



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EVALUATION CERTIFICATE

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Place: Surampalem

Date: 21/11/20

Internal Examiner

External Examiner

Sign:

Sign:



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CONCLUSION

Cardiovascular diseases are the primary cause of death worldwide. They represent one of the most prevalent chronic illnesses and a significant contributor to disability. The overall health of cardiovascular patients is greatly influenced by their quality of life. Research indicates that cardiovascular disorders have a significant negative impact on the quality of life for both men and women. However, the best approach to managing the disease is by maintaining a healthy lifestyle and following a proper diet. This is achieved through patient counseling, which has been shown to have minimal negative effects. The study was conducted over a six-month period at a single-centered hospital. Data were collected from 110 patients and counseling was provided in collaboration with our clinical guide and dietician. Patients were counseled about medication adherence and the importance of their well-being according to their health condition, resulting in a slight improvement in their quality of life. While the study duration was short, there was a noticeable but not complete improvement in quality of life.



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5.3 CLINICAL PHARMACOKINETICS AND PHARMACOTHERAPEUTIC DRUG MONITORING (THEORY)

Theory : 2 Hrs. /Week

1. **Introduction to Clinical pharmacokinetics.**
2. **Design of dosage regimens:**
Nomograms and Tabulations in designing dosage regimen, Conversion from intravenous to oral dosing, Determination of dose and dosing intervals, Drug dosing in the elderly and pediatrics and obese patients.
3. **Pharmacokinetics of Drug Interaction:**
 - a. Pharmacokinetic drug interactions
 - b. Inhibition and Induction of Drug metabolism
 - c. Inhibition of Biliary Excretion.
4. **Therapeutic Drug monitoring:**
 - a. Introduction
 - b. Individualization of drug dosage regimen (Variability – Genetic, Age and Weight, disease, Interacting drugs).
 - c. Indications for TDM. Protocol for TDM.
 - d. Pharmacokinetic/Pharmacodynamic Correlation in drug therapy.
 - e. TDM of drugs used in the following disease conditions: cardiovascular disease, Seizure disorders, Psychiatric conditions, and Organ transplantations.
5. **Dosage adjustment in Renal and hepatic Disease.**
 - a. Renal impairment
 - b. Pharmacokinetic considerations
 - c. General approach for dosage adjustment in Renal disease.
 - d. Measurement of Glomerular Filtration rate and creatinine clearance.
 - e. Dosage adjustment for uremic patients.
 - f. Extracorporeal removal of drugs.
 - g. Effect of Hepatic disease on pharmacokinetics.
6. **Population Pharmacokinetics.**
 - a. Introduction to Bayesian Theory.
 - b. Adaptive method or Dosing with feed back.
 - c. Analysis of Population pharmacokinetic Data.
7. **Pharmacogenetics**
 - a. Genetic polymorphism in Drug metabolism: Cytochrome P-450 Isoenzymes.
 - b. Genetic Polymorphism in Drug Transport and Drug Targets.
 - c. Pharmacogenetics and Pharmacokinetics/Pharmacodynamic considerations



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ENHANCING RESILIENCE: UNDERSTANDING AND
MITIGATING THE PHYSICAL AND MENTAL
CHALLENGES OF HEMODIALYSIS IN PATIENTS WITH
END-STAGE RENAL DISEASE

The thesis work submitted to



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-
KAKINADA

In partial fulfillment of the requirements for the award of the Degree of
DOCTOR OF PHARMACY

Submitted by

Ms. Duda Shakina	(193G1T0008)
Ms. Gidla Hepzibah Rani	(193G1T0010)
Mr. Rishav	(193G1T0017)
Mr. Ulisi L. S. V. Narayana	(193G1T0030)

Under the esteemed guidance of

HOSPITAL GUIDE

Dr. D. V. S. Somayajulu

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Sr. Consultant Nephrologist

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MAY 2024



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Aditya Nagar, ADB Road, Surampalem-533437, Andhra Pradesh, India

DECLARATION

We hereby declare that the thesis entitled "ENHANCING RESILIENCE: UNDERSTANDING AND MITIGATING THE PHYSICAL AND MENTAL CHALLENGES OF HEMODIALYSIS IN PATIENTS WITH END-STAGE RENAL DISEASE" is a bonafide project work carried out by us, under the guidance of **Dr. D. Sathis Kumar, Professor & Principal, Aditya Pharmacy College (A)** and **Dr. D. V. S. Somayajulu, Senior Consultant Nephrologist & Renal Transplant Physician at Trust Multispeciality Hospitals, Kakinada**, in partial fulfillment of the requirements for the award of the degree of Doctor of Pharmacy in the Department of Pharmacy Practice to Jawaharlal Nehru Technological University-Kakinada (JNTU-K). The work embodied in this thesis is original and has not been submitted in part or in full for any degree of this or any other university.

Place: Surampalem

Date: 6/5/2024

Duda Shakina

D. Shakina

Gidla Hepzibah Rani

G. Hepzibah Rani

Rishav

Rishav

Ulisi Lakshmi Sri Venkata Narayana

U.L.S.V. Narayana



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CERTIFICATE BY THE GUIDES

This is to certify that the thesis work entitled "ENHANCING RESILIENCE: UNDERSTANDING AND MITIGATING THE PHYSICAL AND MENTAL CHALLENGES OF HEMODIALYSIS IN PATIENTS WITH END-STAGE RENAL DISEASE" is a bonafide Project work carried out by Ms. Duda Shakina (Reg. No. 193G1T0008), Ms. Gidla Hepzibah Rani (Reg. No. 193G1T0010), Mr. Rishav (Reg. No. 193G1T0017) & Mr. Ulisi Lakshmi Sri Venkata Narayana (Reg. No. 193G1T0030), under the guidance of us at the Department of Pharmacy Practice, Aditya Pharmacy College (A), and the Department of Nephrology, Trust Multispeciality Hospitals, Kakinada. In our opinion, this work has reached the standards in partial fulfillment of the requirements for the award of the degree of Doctor of Pharmacy as per the regulations of the University.

Place: Surampalem & Kakinada

Date:

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The results incorporated in this work have not been submitted to any other university or institute for the award of any degree.

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Date: 01/05/24





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Place: Surampalem

Date: 01/5/21

Internal Examiner

External Examiner

Sign:

Sign:



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CONCLUSION

End-stage renal disease (ESRD) significantly diminishes the quality of life (QOL) for patients undergoing Hemodialysis, as evidenced by the Pre-Score values obtained before the given intervention. This decline manifests in both physical limitations such as fatigue, and pain, and mental health challenges such as depression, and anxiety, as reported by patients themselves. However, by incorporating supportive interventions into treatment plans, healthcare providers have the potential to significantly improve patient well-being.

Social support groups can foster social connections and reduce isolation, while psychosocial counseling can address mental health issues. Intradialytic exercises can improve physical limitations and fatigue. Providing education to the Patients with ESRD undergoing Hemodialysis on what is the condition they are suffering from, what is about Hemodialysis, debunking the myths, and providing much more insights into the problems and the strategies to overcome them might help them enhance their overall well-being. These interventions, grounded in theories like Social Support Theory, can not only enhance patient resilience and QOL but also lead to improved clinical outcomes such as treatment adherence and potentially reduce healthcare costs in the long run.

Overall, this study provided preliminary evidence that a combination of Intradialytic exercise, support groups, and patient education counseling may improve the quality of life of ESRD patients undergoing hemodialysis. However, the single-arm design and short follow-up period limit the generalizability and strength of the conclusions. Future research with a control group, a longer follow-up period, and a more diverse participant pool is warranted to confirm these findings and explore the long-term sustainability of these interventions in improving patient resilience and QOL.



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4.4 BIOSTATISTICS AND RESEARCH METHODOLOGY (THEORY)

Theory : 2 Hrs. /Week

1. Detailed syllabus and lecture wise schedule

1 Research Methodology

- a) Types of clinical study designs:
Case studies, observational studies, interventional studies,
- b) Designing the methodology
- c) Sample size determination and Power of a study
Determination of sample size for simple comparative experiments, determination of sample size to obtain a confidence interval of specified width, power of a study
- d) Report writing and presentation of data

2 Biostatistics

2.1 a) Introduction

- b) Types of data distribution
- c) Measures describing the central tendency distributions- average, median, mode
- d) Measurement of the spread of data-range, variation of mean, standard deviation, variance, coefficient of variation, standard error of mean.

2.2 Data graphics

Construction and labeling of graphs, histogram, piecharts, scatter plots, semilogarithmic plots

2.3 Basics of testing hypothesis

- a) Null hypothesis, level of significance, power of test, P value, statistical estimation of confidence intervals.
- b) Level of significance (Parametric data)- students t test (paired and unpaired), chi Square test, Analysis of Variance (one-way and two-way)
- c) Level of significance (Non-parametric data)- Sign test, Wilcoxon's signed rank test, Wilcoxon rank sum test, Mann Whitney U test, Kruskal-Wallis test (one way ANOVA)
- d) Linear regression and correlation- Introduction, Pearson's and Spearman's correlation and correlation co-efficient.
- e) Introduction to statistical software: SPSS, Epi Info, SAS.



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2.4 Statistical methods in epidemiology

Incidence and prevalence, relative risk, attributable risk

3. Computer applications in pharmacy

Computer System in Hospital Pharmacy: Patterns of Computer use in Hospital Pharmacy – Patient record database management, Medication order entry – Drug labels and list – Intravenous solution and admixture, patient medication profiles, Inventory control, Management report & Statistics.

Computer In Community Pharmacy

Computerizing the Prescription Dispensing process

Use of Computers for Pharmaceutical Care in community pharmacy

Accounting and General ledger system

Drug Information Retrieval & Storage :

Introduction – Advantages of Computerized Literature Retrieval

Use of Computerized Retrieval

Reference books:

- a. Pharmaceutical statistics- practical and clinical applications, Sanford Bolton 3rd edition, publisher Marcel Dekker Inc. NewYork.
- b. Drug Information- A Guide for Pharmacists, Patrick M Malone, Karen L Kier, John E Stanovich , 3rd edition, McGraw Hill Publications 2006



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ASSESSMENT OF PREVALENCE OF FIBROSIS IN NON-ALCOHOLIC FATTY LIVER DISEASE PATIENTS USING FIBROSCAN: INTEGRATING PATIENT EDUCATION FOR EFFECTIVE DISEASE MANAGEMENT IN A TERTIARY CARE HOSPITAL

The thesis work submitted to



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-
KAKINADA**

*In partial fulfillment for the award of the Degree of
DOCTOR OF PHARMACY*

Submitted by

ALLAVARAPU MANOGNA	(193G1T0002)
BOKKA PRADEEPTHI	(193G1T0004)
JAKKULA SUPRIYA	(193G1T0012)
NISAR AHMED	(193G1T0016)

Under the esteemed guidance of

CLINICAL GUIDE

Dr. R. SRINIVAS MURTY

MBBS, MD, DM

Sr. Consultant Gastroenterologist

Trust Multispeciality Hospitals, Kakinada

ACADEMIC GUIDE

Ms. P. RATNA KUMARI, M. Pharm

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DECLARATION

We hereby declare that the thesis entitled "ASSESSMENT OF PREVALENCE OF FIBROSIS IN NON-ALCOHOLIC FATTY LIVER DISEASE PATIENTS USING FIBROSCAN: INTEGRATING PATIENT EDUCATION FOR EFFECTIVE DISEASE MANAGEMENT IN A TERTIARY CARE HOSPITAL" is a bonafide project work carried out by us under the guidance of *Ms. P. Ratna Kumari, Associate Professor, Department of Pharmacy Practice, Aditya Pharmacy College (A)* and *Dr. R. Srinivas Murty, Senior Consultant Gastroenterologist and Hepatologist at Trust Multispecialty Hospitals, Kakinada*, in partial fulfillment of the requirements for the Award of the Degree of Doctor of Pharmacy in the Department of Pharmacy Practice to Jawaharlal Nehru Technological University-Kakinada (JNTU-K). The work embodied in this thesis is original and has not been submitted in part or in full for any degree of this or any other university.

Place: Surampalem

Date:

Allavarapu Manogna

Bokka Pradeepthi

Jakkula Supriya

Nisar Ahmed

A. Manogna

B. Pradeepthi

J. Supriya

Nisar Ahmed



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CERTIFICATE BY THE GUIDES

This is to certify that the thesis work entitled "ASSESSMENT OF PREVALENCE OF FIBROSIS IN NON-ALCOHOLIC FATTY LIVER DISEASE PATIENTS USING FIBROSCAN: INTEGRATING PATIENT EDUCATION FOR EFFECTIVE DISEASE MANAGEMENT IN A TERTIARY CARE HOSPITAL" is a bonafide Project work carried out by **ALLAVARAPU MANOGNA** (Reg. No. 193G1T0002), **BOKKA PRADEEPTHI** (Reg. No. 193G1T0004), **JAKKULA SUPRIYA** (Reg. No. 193G1T0012) & **NISAR AHMED** (Reg. No. 193G1T0016), under the guidance of us at the Department of Pharmacy Practice, Aditya Pharmacy College (A), and Dept. of Gastroenterology and Hepatology, Trust Multispecialty Hospitals, Kakinada. In our opinion, this work has reached the standards in fulfillment of the partial requirement for the award of the degree of Doctor of Pharmacy per the regulations of the University.

Place: Surampalem & Kakinada

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The results incorporated in this work have not been submitted to any other university or institute for the award of any degree.

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Place: Surampalem

Date: 10/5/24



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Date:

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Internal Examiner Signature

External Examiner Signature



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9) CONCLUSION

Our prospective observational study aimed to assess the prevalence of fibrosis in NAFLD patients. We found a high prevalence of both fibrosis and NAFLD in our study sample, largely attributed due to the higher prevalence of overweight/obesity and sedentary lifestyle. The correlation between obesity, as indicated by BMI, and the severity of liver involvement accentuates the importance of weight management interventions in mitigating the progression of NAFLD. Patients with conditions like diabetes and high blood pressure are also more likely to develop NAFLD. Our findings align with existing literature, emphasizing the global burden of NAFLD and the necessity for tailored interventions to address its multifactorial etiology.

The high prevalence rates of NAFLD and fibrosis emphasize the urgent need for increased awareness and proactive screening strategies, particularly among populations with associated risk factors such as obesity, diabetes mellitus, hypertension, and metabolic syndrome.




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2.2 PHARMACEUTICAL MICROBIOLOGY (THEORY)

Theory : 3 Hrs. /Week

- 1. Scope of the Subject:** Microbiology has always been an essential component of pharmacy curriculum. This is because of the relevance of microbiology to pharmaceutical sciences and more specifically to pharmaceutical industry. Pharmaceutical biotechnology is the logical extension of pharmaceutical microbiology, which is expected to change the complete drug product scenario in the future.

This course deals with the various aspects of microorganisms, its classification, morphology, laboratory cultivation identification and maintenance. It also discusses with sterilization of pharmaceutical products, equipment, media etc. The course further discusses the immunological preparations, diseases its transmission, diagnosis, control and immunological tests.

2. Objectives of the Subject :

Upon completion of the subject student shall be able to –

- a. know the anatomy, identification, growth factors and sterilization of microorganisms;
- b. know the mode of transmission of disease causing microorganism, symptoms of disease, and treatment aspect;
- c. do estimation of RNA and DNA and there by identifying the source;
- d. do cultivation and identification of the microorganisms in the laboratory;
- e. do identification of diseases by performing the diagnostic tests; and
- f. appreciate the behavior of motility and behavioral characteristics of microorganisms.

Text books (Theory)

- a. Vanitha Kale and Kishor Bhusari “ Applied Microbiology ” Himalaya Publishing house Mumbai.
- b. Mary Louis Turgeon “ Immunology and Serology in Laboratory Medicines” 2nd edition, 1996 Mosby- Year book inc St. Louis Missouri 63146.
- c. Harsh Mohan, “ Text book of Pathology” 3rd edition, 1998, B-3 Ansari road Darya ganj N. Delhi.

Reference books (Theory)

- a. Prescott L.M., Jarley G.P Klein D.A “Microbiology” 2nd - edition Mc Graw Hill Company Inc
- b. Rawlins E.A.”Bentley’s Text Book of Pharmaceutics” B ailliere Tindals 24-28 London 1988
- c. Forbisher “ Fundamentals of Microbiology” Philadelphia W.B. Saunders.
- d. Prescott L.M. Jarley G.P., Klein.D.A. “ Microbiology.”2nd edition WMC Brown Publishers, Oxford. 1993
- e. War Roitt, Jonathan Brostoff, David male, “ Immunology”3rd edition 1996, Mosby-year book Europe Ltd, London.
- f. Pharmacopoeia of India, Govt of India, 1996.



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3. Detailed syllabus and lecture wise schedule :

Title of the topic

- 1 Introduction to the science of microbiology. Major divisions of microbial world and Relationship among them.
- 2 Different methods of classification of microbes and study of Bacteria, Fungi, virus, Rickettsiae, Spirochetes.
- 3 Nutritional requirements, growth and cultivation of bacteria and virus. Study of different important media required for the growth of aerobic and anaerobic bacteria & fungi. Differential media, enriched media and selective media, maintenance of lab cultures.
- 4 Different methods used in isolation and identification of bacteria with emphasis to different staining techniques and biochemical reactions. Counting of bacteria -Total and Viable counting techniques.
- 5 Detailed study of different methods of sterilization including their merits and demerits. Sterilization methods for all pharmaceutical products. Detailed study of sterility testing of different pharmaceutical preparations . Brief information on Validation.
- 6 Disinfectants- Study of disinfectants, antiseptics, fungicidal and virucidal agents factors affecting their activation and mechanism of action. Evaluation of bactericidal, bacteristatic, , virucidal activities, evaluation of preservatives in pharmaceutical preparations.
- 7 Immunology- Immunity, Definition, Classification, General principles of natural immunity, Phagocytosis, acquired immunity(active and passive) . Antigens, chemical nature of antigens structure and formation of Antibodies, Antigen-Antibody reactions. Bacterial exotoxins and endotoxins. Significance of toxoids in active immunity, Immunization programme, and importance of booster dose.
- 8 Diagnostic tests : Schick's Test, Elisa test, Western Blot test, Southern Blot PCR Widal, QBC, Mantoux Peripheral smear. Study of malarial parasite.
- 9 Microbial culture sensitivity Testing: Interpretation of results Principles and methods of different microbiological assays, microbiological assay of Penicillin, Streptomycin and vitamin B₂ and B₁₂. Standardisation of vaccines and sera.
- 10 Study of infectious diseases: Typhoid, Tuberculosis, Malaria, Cholera, Hepatitis, Meningitis, Syphilis & Gonorrhea and HIV.

2.2 PHARMACEUTICAL MICROBIOLOGY (PRACTICAL)

Practical : 3 Hrs./Week

Title of the Experiment:

- 1 Study of apparatus used in experimental microbiology*.
- 2 Sterilisation of glass ware's. Preparation of media and sterilisation.*
- 3 Staining techniques – Simple staining ; Gram's staining ; Negative staining**
- 4 Study of motility characters*.
- 5 Enumeration of micro-organisms (Total and Viable)*
- 6 Study of the methods of isolation of pure culture.*
- 7 Bio chemical testing for the identification of micro*-organisms.



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ASSESSING THE EFFECTIVENESS OF NUTRITIONAL
COUNSELLING ON QUALITY OF LIFE IN HAEMODIALYSIS
PATIENTS : AN OBSERVATIONAL STUDY

The thesis work submitted to



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-
KAKINADA

In partial fulfillment for the award of the Degree of
DOCTOR OF PHARMACY

Submitted by

Gudivada Sankeerthana	(193G1T0011)
Sankhanil Panda	(193G1T0018)
Vanarasi Sri Satya Manojna Naidu	(193G1T0022)
Yati Raj	(193G1T0024)

Under the esteemed guidance of

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Dr. Sana Praveen

MRCP (UK), CCT (Nephrology)

Senior Consultant, Nephrology

Trust Multispeciality Hospitals, Kakinada

INSTITUTIONAL GUIDE

Dr. Pavan Kumar Yanamadala

PharmD

Associate Professor

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DECLARATION

I hereby declare that the thesis entitled "ASSESSING THE EFFECTIVENESS OF NUTRITIONAL COUNSELLING ON QUALITY OF LIFE IN HAEMODIALYSIS PATIENTS : AN OBSERVATIONAL STUDY" is a bonafide project work carried out by me under the guidance of *Dr. Pavan Kumar Yanamadala, Professor, Aditya Pharmacy College (A)* and *Dr. Sana Praveen, Senior Consultant Nephrologist at Trust Multispeciality Hospitals, Kakinada*, in partial fulfillment of the requirements for the Award of the Degree of Doctor of Pharmacy in the Department of Pharmacy Practice to Jawaharlal Nehru Technological University-Kakinada (JNTU-K). The work embodied in this thesis is original and has not been submitted in part or in full for any degree of this or any other university.

Place: Surampalem

Date: 10/05/2024

Gudivada Sankeerthana
Sankhanil Panda
Vanarasi Sri Satya Manojna Naidu
Yati Raj

G. Sankeerthana
Sankhanil Panda
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Yati Raj



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CERTIFICATE BY THE GUIDES

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Place: Surampalem & Kakinada

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The results incorporated in this work have not been submitted to any other university or institute for the award of any degree.

Dr. D. Sathis Kumar

M.Pharm, Ph.D

Principal

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Surampalem-533437

Place: Surampalem

Date: 12/5/24



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Place: Surampalem

Date: 10/5/24

Internal Examiner

External Examiner

Sign:

Sign:



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CONCLUSION: -

The study conducted aimed at finding out the impact and the effectiveness of nutritional counselling which was being provided to the patients as a method of improving their quality of life. The difference in the quality of life of the patients undergoing regular haemodialysis before they were provided with the nutritional counselling and after they were provided with the nutritional counselling acts as the parameter of measuring the difference in quality of life and to check if there is any improvement which was statistically significant.

Based upon the results obtained from the statistical analysis, it can be concluded that since the calculated p value at 0.05 level of significance (α) is less than the critical p value at the same level of significance, the null hypothesis is rejected.

Therefore, the alternate hypothesis is accepted and the statistical analysis leads to the conclusion that there is a statistically significant difference between the Quality-of-Life scores obtained prior to the patient receiving nutritional and dietary counselling and the Quality-of-Life scores obtained subsequent to the patient receiving such counselling.

Thus, it can be concluded that the nutritional counselling provided to the patient is having a statistically significant impact and is effective in Improving the Quality of Life of patients undergoing regular Haemodialysis.



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1.3 MEDICINAL BIOCHEMISTRY (THEORY)

Theory : 3 Hrs. /Week

1. Scope of the Subject: Applied biochemistry deals with complete understanding of the molecular level of the chemical process associated with living cells. Clinical chemistry deals with the study of chemical aspects of human life in health and illness and the application of chemical laboratory methods to diagnosis, control of treatment, and prevention of diseases.

2. Objectives of the Subject (Know, do, appreciate) :

The objective of the present course is providing biochemical facts and the principles to the students of pharmacy. Upon completion of the subject student shall be able to –

- understand the catalytic activity of enzymes and importance of isoenzymes in diagnosis of diseases;
- know the metabolic process of biomolecules in health and illness (metabolic disorders);
- understand the genetic organization of mammalian genome; protein synthesis; replication; mutation and repair mechanism;
- know the biochemical principles of organ function tests of kidney, liver and endocrine gland; and
- do the qualitative analysis and determination of biomolecules in the body fluids.

Text books (Theory)

- Harpers review of biochemistry - Martin
- Text book of biochemistry – D.Satyanarayana
- Text book of clinical chemistry- Alex kaplan & Laverve L.Szabo

Reference books (Theory)

- Principles of biochemistry -- Lehninger
- Text book of biochemistry -- Ramarao
- Practical Biochemistry-David T.Plummer.
- Practical Biochemistry-Pattabhiraman.

3. Lecture wise programme:

Topics

- 1 Introduction to biochemistry:** Cell and its biochemical organization, transport process across the cell membranes. Energy rich compounds; ATP, Cyclic AMP and their biological significance.
- 2 Enzymes:** Definition; Nomenclature; IUB classification; Factor affecting enzyme activity; Enzyme action; enzyme inhibition. Isoenzymes and their therapeutic and diagnostic applications; Coenzymes and their biochemical role and deficiency diseases.
- 3 Carbohydrate metabolism:** Glycolysis, Citric acid cycle (TCA cycle), HMP shunt, Glycogenolysis, gluconeogenesis, glycogenesis. Metabolic disorders of carbohydrate metabolism (diabetes mellitus and glycogen storage diseases); Glucose, Galactose tolerance test and their significance; hormonal regulation of carbohydrate metabolism.



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**DIABETES IN FOCUS: INVESTIGATING THE PREVALENCE AND
ASSESSING RISK FACTORS FOR THE DEVELOPMENT OF MICRO
AND MACROVASCULAR COMPLICATIONS IN PATIENTS WITH
DIABETES MELLITUS**

The thesis work submitted to



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-
KAKINADA**

*In partial fulfilment for the award of the Degree of
DOCTOR OF PHARMACY*

Submitted by

AKASAPU MADHURI	(193G1T0001)
CHILAKA SWARNAKISHORE	(193G1T0006)
THOTA THANMAYI SAI LAKSHMI	(193G1T0021)
VEMANA HEMA RATNA SAI LAKSHMI	(193G1T0023)

Under the esteemed guidance of

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2024



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DECLARATION

We hereby declare that the thesis entitled "DIABETES IN FOCUS: INVESTIGATING THE PREVALENCE AND ASSESSING RISK FACTORS FOR THE DEVELOPMENT OF MICRO AND MACROVASCULAR COMPLICATIONS IN PATIENTS WITH DIABETES MELLITUS" is a bonafide project work carried out by us under the guidance of *Dr. P. S. V. M. Deepika, Assistant Professor, Aditya Pharmacy College (A)* and *Dr. M. Phani Ramana Bhushan, Senior Consultant General Physician at Trust Multispeciality Hospitals, Kakinada*, in partial fulfillment of the requirements for the Award of the Degree of Doctor of Pharmacy in the Department of Pharmacy Practice to Jawaharlal Nehru Technological University-Kakinada (JNTU-K). The work embodied in this thesis is original and has not been submitted in part or in full for any degree of this or any other university.

Place: Surampalem

Date: 06-05-2024

Akasapu Madhuri

Chilaka Swarna Kishore

Thota Thanmayi Sai Lakshmi

Vemana Hema Ratna Sai Lakshmi

A. Madhuri

Ch. Swarna Kishore

Thota Thanmayi Sai Lakshmi

V.H.R. Sai Lakshmi




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Date: 06-05-2024

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The results incorporated in this work have not been submitted to any other university or institute for the award of any degree.

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M. Pharm, Ph. D.

Principal,

Aditya Pharmacy College (A),
Surampalem-533437

Place: Surampalem

Date: 6/5/20

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Place: Surampalem

Date: 01/05/23

Internal Examiner

External Examiner

Sign:

Sign:



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SURAMPALAM-533 437

CONCLUSION

From our study we can conclude that the prevalence of macrovascular complications is more when compared to microvascular complications. CAD and Diabetic Nephropathy are highly prevalent. The study shows the prevalence of vascular complications is higher in the subjects with age within the range of 61-70 years, subjects with prolonged duration of diabetes of 6-10 years, positive family history of diabetes, lack of sleep, medical history of hypertension and subjects with uncontrolled blood glucose levels and males are found to be most affected with vascular complications. Early DM screening and investigation are recommended to identify risk factors, target them with tailored treatment and management strategies and prevent complications. To fully analyze and comprehend the potential danger and causative elements, more research investigations must be done. Therefore, there is a need for further study in the field of Diabetes.

DEPARTMENT OF PHARMACY PRACTICE | Aditya Pharmacy College(A)




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1.1 HUMAN ANATOMY & PHYSIOLOGY (PRACTICAL)

Practical : 3 Hrs./Week

General Requirements: Dissection box, Laboratory Napkin, muslin cloth, record, Observation book(100pages), Stationary items, Blood lancet.

Course materials:

Text books

Goyal, R. K, Natvar M.P, and Shah S.A, Practical anatomy, physiology and biochemistry, latest edition, Publisher: B.S Shah Prakashan, Ahmedabad.

Reference books

Ranade VG, Text book of practical physiology, Latest edition, Publisher: PVG, Pune
Anderson Experimental Physiology, Latest edition, Publisher: NA

List of Experiments:

1. Study of tissues of human body
 - (a) Epithelial tissue.
 - (b) Muscular tissue.
2. Study of tissues of human body
 - (a) Connective tissue.
 - (b) Nervous tissue.
3. Study of appliances used in hematological experiments.
4. Determination of W.B.C. count of blood.
5. Determination of R.B.C. count of blood.
6. Determination of differential count of blood.
7. Determination of
 - (a) Erythrocyte Sedimentation Rate.
 - (b) Hemoglobin content of Blood.
 - (c) Bleeding time & Clotting time.
8. Determination of
 - (a) Blood Pressure.
 - (b) Blood group.
9. Study of various systems with the help of charts, models & specimens
 - (a) Skeleton system part I-axial skeleton.
 - (b) Skeleton system part II- appendicular skeleton.
 - (c) Cardiovascular system.
 - (d) Respiratory system.



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- (e) Digestive system.
- (f) Urinary system.
- (g) Nervous system.
- (h) Special senses.
- (i) Reproductive system.

10. Study of different family planning appliances.
11. To perform pregnancy diagnosis test.
12. Study of appliances used in experimental physiology.
13. To record simple muscle curve using gastrocnemius sciatic nerve preparation.
14. To record simple summation curve using gastrocnemius sciatic nerve preparation.
15. To record simple effect of temperature using gastrocnemius sciatic nerve preparation.
16. To record simple effect of load & after load using gastrocnemius sciatic nerve preparation.
17. To record simple fatigue curve using gastrocnemius sciatic nerve preparation.

Scheme of Practical Examination:

	Sessionals	Annual
Identification	04	10
Synopsis	04	10
Major Experiment	07	20
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of
Human Anatomy and physiology

Name: B: Dhanu Sri

PIN No. 233GIT0004

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. Bhupathi Dhanu Sri

a student of 1st Pharm-D with Regd. No. 233GIT0004

in the HUMAN ANATOMY & PHYSIOLOGY - I
HAP - Laboratory during the year 2023-2024

No. of Experiments Conducted 22

No. of Experiments Attended 22

[Signature]
Signature - Faculty incharge

[Signature]
Signature-Head of the Department

Submitted for the practical examination held on

[Signature]
Examiner-1

[Signature]
Examiner-2



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
01.	23-11-23	Compound Microscope	01-4	Cyp 30.11.2023
02.	30-11-23	Estimation of Bleeding Time	5-6	Cyp 7.12.2023
03.	7-12-23	Estimation of clotting Time	7-8	Cyp 14.12.2023
04.	14-12-23	Determination of Breath holding Time	09	Cyp 21.12.2023
05.	21-12-23	Determination of Rate of Respiration	10	Cyp 04.01.2024
06.	28-12-23	Determination of Human Blood group	11-12	Cyp 11.01.2024
07.	04-1-24	Estimation of Haemoglobin Content	13-15	Cyp 21/3/24
08.	29-2-24	Study of Haemocytometry.	16-19	9 21/3/24
09.	7-3-24	Enumeration of Red blood Cells.	20-23	
10.	14-3-24	Enumeration of White blood Cells.	24-28	
11.	21-3-24	Determination of Erythrocyte Sedimentation Rate	29-32	



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
12.	21-3-24	Determination of Blood pressure	32-36	9
13.	28-3-24	Determination of Differential Leucocytes.	37-41	
14.	9-4-24	Identification of slides.	42-47	11/11/24
15.	11-4-24	A- Skeletal system (1) Axial B- Skeletal system (2) Appendicular C- Cardiovascular system.	48-50 51-54 55-56	
16.	18-4-24	D- Respiratory system E- Digestive system F- Urinary system	57-58 59-62 63-64	28/11/24
17.	28-4-24	G- Nervous system H- special Senses I - Reproductive System • Male • Female	65-66 67-69 70-71 72-73	
18.	02-5-24	study of diffrent Family Planning Appliances.	74-78	a/5/24
19.	09-5-24	Pregnancy diagnosis Test.	79-81	9
20.	16-5-24	Appliances used in the Experimental physiology.	82-83	
21.	16-5-24	Recording simple Muscle Twitch	84-86	24/6/24
22.	6-6-24	Phenomenon of Fatigue.	87-89	



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- 7 Biphasic dosage forms: Suspensions and emulsions, Definition, advantages and disadvantages, classification, test for the type of emulsion, formulation, stability and evaluation.
- 8 Suppositories and pessaries: Definition, advantages and disadvantages, types of base, method of preparation, Displacement value and evaluation.
- 9 Galenicals: Definition, equipment for different extraction processes like infusion, Decoction, Maceration and Percolation, methods of preparation of spirits, tinctures and extracts.
- 10 Pharmaceutical calculations.
- 11 Surgical aids: Surgical dressings, absorbable gelatin sponge, sutures, ligatures and medicated bandages.
- 12 Incompatibilities: Introduction, classification and methods to overcome the incompatibilities.

1.2 PHARMACEUTICS (PRACTICAL)

Practical : 3 Hrs./Week

List of Experiments:

1. Syrups

- a. Simple Syrup I.P
- b. Syrup of Ephedrine Hcl NF
- c. Syrup Vasaka IP
- d. Syrup of ferrous Phosphate IP
- e. Orange Syrup

2. Elixir

- a. Piperizine citrate elixir BP
- b. Cascara elixir BPC
- c. Paracetamol elixir BPC

3. Linctus

- a. Simple Linctus BPC
- b. Pediatric simple Linctus BPC

4. Solutions

- a. Solution of cresol with soap IP
- b. Strong solution of ferric chloride BPC
- c. Aqueous Iodine Solution IP
- d. Strong solution of Iodine IP
- e. Strong solution of ammonium acetate IP



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5. **Liniments**
 - a. Liniment of turpentine IP*
 - b. Liniment of camphor IP
6. **Suspensions***
 - a. Calamine lotion
 - b. Magnesium Hydroxide mixture BP
7. **Emulsions***
 - a. Cod liver oil emulsion
 - b. Liquid paraffin emulsion
8. **Powders***
 - a. Eutectic powder
 - b. Explosive powder
 - c. Dusting powder
 - d. Insufflations
9. **Suppositories***
 - a. Boric acid suppositories
 - b. Chloral suppositories
10. **Incompatibilities**
 - a. Mixtures with Physical
 - b. Chemical & Therapeutic incompatibilities

* colourless bottles required for dispensing * Paper envelope (white), butter paper and white paper required for dispensing.

Scheme of Practical Examination:

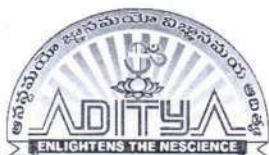
	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of

PHARMACEUTICS

Name: V. Vahini

PIN No. 23361T0029

*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. VEERANALA VAHINI

a student of 1st PHARM.D with Regd. No. 23361T0029

in the PHARMACEUTICS Laboratory during the year 2023-24

No. of Experiments Conducted 31

No. of Experiments Attended 31

G. Saideen

Signature - Faculty incharge

[Signature]

Signature-Head of the Department

PRINCIPAL

Aditya Pharmacy College

Submitted for the practical examination held on SURAMPALEM-2024

A. Anand

Examiner-1

[Signature]

Examiner-2



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S.No.	Date	Name of the Experiment	Page No.	Remarks
1)	25/11/23	simple syrup (I.P)	6-7	B
2)	2/12/23	orange syrup (I.P)	pg-8-9	
3)	9/12/23	vasaka syrup (I.P)	pg-10-11	
4)	16/12/23	compound ferrous phosphate (B.P.C)	12-14	
5)	16/12/23	ephedrine hydrochloride syrup (I.P)	15-16	
6)	23/12/23	paracetamol paediatric elixir (B.P.C)	18-19	
7)	30/12/23	piperaizine citrate elixir (B.P.C)	20-21	
8)	6/1/24	cascara elixir (B.P.C)	22-23	
9)	27/1/24	simple Linctus (B.P.C)	25-26	
10)	27/1/24	Paediatric simple Linctus	27-	
11)	3/2/24	Aqueous iodine solution	29-30	B
12)	10/2/24	strong iodine solution	31-32	
13)	17/2/24	CRESOL SOAP SOLUTION (I.P)	33-34	
14)	2/3/24	STRONG AMMONIUM ACETATE SOLUTION (I.P)	35-36	
15)	16/3/24	CAMPBOR LINIMENT (I.P)	38-39	
16)	16/3/24	TURPENTINE LINIMENT (I.P)	40-41	
17)	23/3/24	CALAMINE LOTION	42-43	
18)	6/4/24	MAGNESIUM HYDROXIDE MIXTURE (B.P.C)	44-46	
19)	20/4/24	LIQUID PARAFFIN EMULSION	47-48	
20)	27/4/24	COD LIVER OIL EMULSION	49-50	
21)	27/4/24	ZINC OXIDE STARCH DUSTING POWDER (NFI)	53-	B
22)	11/5/24	EUTECTIC POWDER	54	
23)	18/5/24	EXPLOSIVE POWDER	55	
24)	8/6/24	BORIC ACID SUPPOSITORIES	58-59	
25)	15/6/24	CHLORAL HYDRATE SUPPOSITORIES	60-61	
26)	22/6/24	EMULSION	62	
27)	22/6/24	MIXTURE - I	64	
28)	29/6/24	MIXTURE - II	65	



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1.3 MEDICINAL BIOCHEMISTRY (PRACTICAL)

Practical : 3 Hrs./Week

Title of the Experiment:

- 1 Qualitative analysis of normal constituents of urine.*
- 2 Qualitative analysis of abnormal constituents of urine.*
- 3 Quantitative estimation of urine sugar by Benedict's reagent method.**
- 4 Quantitative estimation of urine chlorides by Volhard's method.**
- 5 Quantitative estimation of urine creatinine by Jaffe's method.**
- 6 Quantitative estimation of urine calcium by precipitation method.**
- 7 Quantitative estimation of serum cholesterol by Libermann Burchard's method.**
- 8 Preparation of Folin Wu filtrate from blood.*
- 9 Quantitative estimation of blood creatinine.**
- 10 Quantitative estimation of blood sugar Folin-Wu tube method.**
- 11 Estimation of SGOT in serum.**
- 12 Estimation of SGPT in serum.**
- 13 Estimation of Urea in Serum.**
- 14 Estimation of Proteins in Serum.**
- 15 Determination of serum bilirubin**
- 16 Determination of Glucose by means of Glucoseoxidase.**
- 17 Enzymatic hydrolysis of Glycogen/Starch by Amylases.**
- 18 Study of factors affecting Enzyme activity. (pH & Temp.)**
- 19 Preparation of standard buffer solutions and its pH measurements (any two)*
- 20 Experiment on lipid profile tests**
- 21 Determination of sodium, calcium and potassium in serum.**

** indicate major experiments & * indicate minor experiments

Assignments:

Format of the assignment

1. Minimum & Maximum number of pages.
2. It shall be computer draft copy.
3. Reference(s) shall be included at the end.
4. Name and signature of the student.
5. Assignment can be a combined presentation at the end of the academic year.
6. Time allocated for presentation may be 8+2 Min.

Scheme of Practical Examination:

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of

Name: DEVYANI SINGH...

PIN No.

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*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. Devyani Singh

a student of 1st PharmD with Regd. No. 23361T0010

in the Medicinal Biochemistry Laboratory during the year 2023-2024

No. of Experiments Conducted

22

No. of Experiments Attended

22

C. V. Muthu

Signature - Faculty incharge

2024

Signature-Head of the Department

Submitted for the practical examination held on 23/7/2024

Examiner-1

Examiner-2



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	25/11/23	Introduction (General Instruction)	1-2	<u>I</u>
2.	25/12/23	Qualitative analysis of normal constituents of urine.	3-8	<u>I</u>
3.	9/12/23	Qualitative analysis of abnormal constituents of urine.	9-15	<u>I</u>
4.	23/12/23	Quantitative estimation of Urine chloride by Volhard Arnold method.	16-18	<u>I</u>
5.	16/12/23	Quantitative estimation of glucose in urine by Benedict's Reagent method.	19-20	<u>I</u>
6.	30/12/23	Quantitative Estimation of Creatinine by Jaffe's method	21-23	<u>I</u>
7.	6/1/24	Quantitative Estimation of Urine Calcium by Precipitation method.	24-25	<u>I</u>
8.	20/1/24	Quantitative Estimation of Serum Cholesterol (By Libermann Burchard's Method)	26-27	<u>I</u>
9.	27/1/24	Quantitative Estimation of Blood Creatinine	28-29	<u>I</u>
10.	²⁷ 08/2/24	Preparation of Folin-Wu filtrate from Blood	30-31	<u>I</u>
11.	08/2/24	Quantitative estimation of Blood Sugar Folin-Wu tube Method.	32-34	<u>I</u>
12.	10/2/24	Estimation of Serum ^{SGOT} ^{PRINCIPAL}	35-37	<u>I</u>



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
13.	2/3/24	Estimation of SGPT in Serum	38 - 39	<u>l</u>
14.	9/3/24	Estimation of urea in Serum	40 - 42	<u>l</u>
15.	16/3/24	Estimation of protein in Serum	43 - 45	<u>l</u>
16.	23/3/24	Estimation of cholesterol in Serum.	46 - 48	<u>l</u>
17.	30/3/24	Determination of Serum Bilirubin	49	<u>l</u>
18.	6/4/24	Determination of Glucose by means of glucose oxidase	50 - 51	<u>l</u>
19.	20/4/24	Enzymatic hydrolysis of glycogen / starch by amylases	52 - 54	<u>l</u>
20.	27/4/24	Study of temperature effecting enzyme activity	55 - 57	<u>l</u>
21.	27/4/24	Preparation of Standard Buffer solution and its pH measurement.	58 - 60	<u>l</u>
22.	11/5/24	Determination of Calcium in Serum	61 - 63	<u>l</u>
23.	18/5/24	Determination of Sodium and potassium in serum.	64 - 66	<u>l</u>



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- 12 Mechanism of aldol condensation, claisen condensation, cannizzaro reaction, crossed aldol condensation, crossed cannizzaro reaction, benzoin condensation, perkin condensation. Knoevenagel, Reformatsky reaction, Wittig reaction, Michael addition.
- 13 Hoffman rearrangement: Migration to electron deficient nitrogen, Sandmeyer's reaction, basicity of amines, diazotisation and coupling, acidity of phenols, Williamson synthesis, Fries rearrangement, Kolbe reaction, Reimer tieman's reactions.
- 14 Nucleophilic aromatic substitution: Bimolecular displacement mechanisms, orientation, comparison of aliphatic nucleophilic substitution with that of aromatic.
- 15 Oxidation reduction reaction.
- 16 Study of the following official compounds- preparation, test for purity, assay and medicinal uses of Chlorbutol, Dimercaprol, Glyceryl trinitrate, Urea, Ethylene diamine dihydrate, Vanillin, Paraldehyde, Ethylene chloride, Lactic acid, Tartaric acid, citric acid, salicylic acid, aspirin, methyl salicylate, ethyl benzoate, benzyl benzoate, dimethyl phthalate, sodium lauryl sulphate, saccharin sodium, mephensin.

1.4 PHARMACEUTICAL ORGANIC CHEMISTRY (PRACTICAL)

Practical : 3 Hrs./Week

I. Introduction to the various laboratory techniques through demonstration involving synthesis of the following compounds (at least 8 compounds to be synthesised):

1. Acetanilide / aspirin (Acetylation)
2. Benzanilide / Phenyl benzoate (Benzoylation)
3. P-bromo acetanilide / 2,4,6 – tribromo aniline (Bromination)
4. Dibenzylidene acetone (Condensation)
5. 1-Phenylazo-2-naphthol (Diazotisation and coupling)
6. Benzoic acid / salicylic acid (Hydrolysis of ester)
7. M-dinitro benzene (Nitration)
8. 9, 10 – Anthraquinone (Oxidation of anthracene) / preparation of benzoic acid from toluene or benzaldehyde
9. M-phenylene diamine (Reduction of M-dinitrobenzene) / Aniline from nitrobenzene
10. Benzophenone oxime
11. Nitration of salicylic acid
12. Preparation of picric acid
13. Preparation of O-chlorobenzoic acid from O-chlorotoluene
14. Preparation of cyclohexanone from cyclohexanol



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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of
Organic Chemistry

Name: P. Jyothirmai Sai Satya Sri

PIN No. 23361T0023

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. P. Jyothirmai Sai Satya Sri

a student of 1st pharm-D with Regd. No. 23361T0023

in the Organic Chemistry laboratory during the year 2023-24

No. of Experiments Conducted 28

No. of Experiments Attended 28

Signature [Signature] Faculty incharge

Signature [Signature] Head of the Department

PRINCIPAL

Aditya Pharmacy College

Submitted for the practical examination held on SURAMPATEM-533 437

Examiner-1 [Signature]

Examiner-2 [Signature]



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SURAMPATEM-533 437

Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	4/12/23	Chemistry laboratory rules and safety precautions	01	
2.	11/12/23	Basic laboratory Techniques for separation & purification	02 - 10	
3.	18/12/23	ACETYLATION	11	
4.	8/1/24	preparation of Aspirin	12 - 13	
5.	22/1/24	preparation of Acetanilide	14 - 15	
6.	29/1/24	BENZYLATION	16	
7.	5/2/24	preparation of Benzanilide	17 - 18	
8.	12/2/24	preparation of Benzophenone oxime	19 - 20	
9.	26/2/24	BROMINATION	21	
10.	4/3/24	preparation of p-Bromo Acetanilide	22 - 23	
11.	11/3/24	NITRATION	24	
12.	18/3/24	preparation of nitrobenzene	25 - 26	
13.	11/4/24	ACETYLATION	27	
14.	8/4/24	preparation of Benzoic acid from Benzanilide	27 - 28	
15.	15/4/24	preparation of phenyl Azo β -naphthol	28 - 29	
16.	22/4/24	preparation of Dibenzylidene Acetone	30 - 31	
17.	6/5/24	Systematic Quantitative Analysis of organic Compound	32 - 53	
18.	6/5/24	Sample - I	54 - 56	
19.	13/5/24	Sample - II	57 - 58	



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S.No.	Date	Name of the Experiment	Page No.	Remarks
20	31/6/24	Sample - III	59 - 60	<i>[Signature]</i>
21	10/6/24	Sample - IV	61 - 63	<i>[Signature]</i>
22	24/6/24	Sample - V	64 - 65	<i>[Signature]</i>
23	1/7/24	Sample - VI	66 - 67	<i>[Signature]</i>
24	1/7/24	Sample - VII	68 - 70	<i>[Signature]</i>
25	8/7/24	Sample - VIII	71 - 72	<i>[Signature]</i>
26	8/7/24	Sample - IX	73 - 74	<i>[Signature]</i>
27	8/7/24	Sample - X	75 - 76	<i>[Signature]</i>
28.	8/7/24	STEREO MODELS	77 - 79	<i>[Signature]</i>

[Signature]

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- 16 Essential Trace elements
- 17 Antimicrobials
- 18 Pharmaceutical aids
- 19 Dental Products
- 20 Miscellaneous compounds
- 21 Radio Pharmaceuticals

1.5 PHARMACEUTICAL INORGANIC CHEMISTRY (PRACTICAL)

Practical : 3 Hrs./Week

1. Limit test (6 exercises)

- a. Limit test for chlorides
- b. Limit test for sulphates
- c. Limit test for iron
- d. Limit test for heavy metals
- e. Limit test for arsenic
- f. Modified limit tests for chlorides and sulphates

2. Assays (10 exercises)

- a. Ammonium chloride- Acid-base titration
- b. Ferrous sulphate- Cerimetry
- c. Copper sulphate- Iodometry
- d. Calcilugluconate- Complexometry
- e. Hydrogen peroxide – Permanganometry
- f. Sodium benzoate – Nonaqueous titration
- g. Sodium chloride – Modified volhard's method
- h. Assay of KI – KIO_3 titration
- i. Gravimetric estimation of barium as barium sulphate
- j. Sodium antimony gluconate or antimony potassium tartarate

3. Estimation of mixture (Any two exercises)

- a. Sodium hydroxide and sodium carbonate
- b. Boric acid and Borax
- c. Oxalic acid and sodium oxalate

4. Test for identity (Any three exercises)

- a. Sodium bicarbonate
- b. Barium sulphate
- c. Ferrous sulphate
- d. Potassium chloride



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5. Test for purity (Any two exercises)

- Swelling power in Bentonite
- Acid neutralising capacity in aluminium hydroxide gel
- Ammonium salts in potash alum
- Adsorption power heavy Kaolin
- Presence of Iodates in KI

6. Preparations (Any two exercises)

- Boric acids
- Potash alum
- Calcium lactate
- Magnesium sulphate

Scheme of Practical Examination :

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment 1&2	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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SURAMPALAM-533 437

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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada. Dist., (A.P.)

Department of Inorganic Chemistry

Name: P. Tyothirmai

PIN No. 23341T0023

*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. P. Tyothirmai Sai Satya Sri

a student of Pharm.D with Regd. No. 23341T0023

in the Inorganic Chem Laboratory during the year 2023-24

No. of Experiments Conducted 35

No. of Experiments Attended 35

Signature - Faculty incharge

Signature-Head of the Department

Submitted for the practical examination held on

Examiner-1

Examiner-2

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SURAMPALM-533 437



Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	14/12/23	Apparatus used in Volumetric Analysis	1 - 7	
		Calibration of Analytic Apparatus	8 - 9	
2.	21/12/23	Standardization of Hydrochloric Acid	10 - 11	
3.	28/12/23	ASSay of Borax	12 - 13	
4.	4/1/24	Standardization of Sodium Hydroxide	14 - 15	
5.	11/1/24	Assay of Ammonium chloride	16 - 17	
6.	18/1/24	ASSay of Sodium Bicarbonate	18 - 19	
7.	1/2/24	ASSay of Boric acid	20 - 21	
8.	8/2/24	ASSay of calcium Bicarbonate	22 - 23	
		NON - AQUEOUS TITRATIONS	24	
9.	15/2/24	Standardization of perchloric acid	25 - 26	
10.	29/2/24	ASSay of Sodium Benzoate	27 - 28	
		COMPLEXOMETRIC TITRATIONS	29	
11.	7/3/24	Standardization of Disodium EDTA	30 - 31	
12.	14/3/24	ASSay of calcium Gluconate	32 - 33	
		REDOX TITRATIONS	34	
		CERIMETRY	35	
13.	21/3/24	ASSay of Ferrous Sulphate	36 - 37	
		PERMANGANOMETRY	38	
14.	28/3/24	ASSay of Hydrogen peroxide	39 - 40	
		IODIMETRY	41	
15.	4/4/24	Standardization of 0.05M of I ₂ Solution using AS ₂ O ₃	42 - 43	
16.	4/4/24	ASSay of Sodium ThioSulphate	44 - 45	
17.	18/4/24	Standardization of Sodium ThioSulphate Solution (0.1M)	46 - 47	



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
18.	18/4/24	ASSay of Copper Sulphate	48-49	
19.	9/5/24	ASSay of NaCl	50-53	
		POTASSIUM IODATE TITRATION	54	
20.	9/5/24	ASSay of potassium Iodide	55-56	
21.	16/5/24	Gravimetric Estimation of Barium as Barium Sulphate	57-58	
22.	16/5/24	preparation of potash Alum	59	
23.	30/5/24	preparation of magnesium Sulphate	60	
24.	30/5/24	preparation of Boric acid	61-62	
25.	6/6/24	Swelling power of Bentonite	63	
26.	6/6/24	Neutralisation Capacity of $Al(OH)_3$	64-65	
27.	13/6/24	Determination of mixture of Sodium carbonate in Sodium Hydroxide.	66-67	
28.	13/6/24	Identification of Barium Sulphate	68	
29.	20/6/24	Identification of ferrous Sulphate	69	
30.	20/6/24	Identification of potassium Chloride	70	
		LIMIT TESTS	71-72	
31.	27/6/24	limit test for chlorides	73-74	
32.	27/6/24	limit test for Sulphates	75-76	
33.	4/7/24	limit test for Iron	77-78	
34.	4/7/24	limit test for Heavy metals	79-82	
35.	11/7/24	limit test for Arsenic	83-85	



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1.6 BIOLOGY (PRACTICAL)

Practical : 3 Hrs./Week

Title:

1. Introduction of biology experiments
2. Study of cell wall constituents and cell inclusions
3. Study of Stem modifications
4. Study of Root modifications
5. Study of Leaf modifications
6. Identification of Fruits and seeds
7. Preparation of Permanent slides
8. T.S. of Senna, Cassia, Ephedra, Podophyllum.
9. Simple plant physiological experiments
10. Identification of animals
11. Detailed study of Frog
12. Computer based tutorials

Scheme of Practical Examination :

	Sessionals	Annual
Identification	04	10
Synopsis	04	10
Major Experiment	07	20
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance.



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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of

M. Biology

Name: Prasant Das

PIN No. 2334170024

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. PRASANT DAS

a student of 1st Pharm-D with Regd. No. 2334170024

in the 1st Pharm-D BIOLOGY Laboratory during the year 2023-2024

No. of Experiments Conducted 18

No. of Experiments Attended 18

Katlik.
Signature - Faculty Incharge
19/11/2024.

007
Signature-Head of the Department

Submitted for the practical examination held on SURAMPATEM



Katlik.
Examiner-1

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SURAMPATEM-533 437

Katlik.
Examiner-2

Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	6/12/13	Introduction to Pharmacological Biology Practicals	01 to 07	<u>Katlik</u>
2.	13/12/23	Study of compound microscope	08 to 14	<u>Katlik</u>
3.	27/12/23	Study of Cell wall Constituents And cell Inclusions	15 to 23	<u>Katlik</u>
4.	3/1/24	Study OF Different Modifications of Root	24 to 28	<u>Katlik</u>
5.	29/1/24	Study of Different modification of Stem	29 to 32	<u>Katlik</u>
6.	11/2/24	Study of different Modifications of Leaf	33 to 34	<u>Katlik</u>
7.	8/2/24	Microscopic Study of Senna Leaf	35 to 38	<u>Katlik</u>
8.	28/2/24	Internal Structure of Dicot Root	39 to 42	<u>Katlik</u>
9.	6/3/24	Internal Structure of Monocot Root	43 to 46	<u>Katlik</u>
10.	13/3/24	Internal Structure of Dicot Stem	47 to 50	<u>Katlik</u>



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
11.	13/3/24	Transverse Section of a Monocot Stem	51 to 53	<u>Keethik</u>
12.	20/3/24	Microscopic Study of Cassia Cinnamon	54 to 56	<u>Keethik</u>
13.	27/03/24	Microscopic Study of Ephedra Stem	57 to 58	<u>Keethik</u>
14.	03/4/24	Microscopic Study of Podophyllum	59 to 60	<u>Keethik</u>
15.	17/4/24	Detailed Study of Rhog	61 to 65	<u>Keethik</u>
16.	29/4/24	Preparation of Permanent Slide	66-68	<u>Keethik</u>
17.	01/5/24	Simple Plant Physiological Experiment	69 to	<u>Keethik</u>
18.	8/5/24	Computer based tutorial	70 to 72	<u>Keethik</u>



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3. Detailed syllabus and lecture wise schedule :

Title of the topic

- 1 Introduction to the science of microbiology. Major divisions of microbial world and Relationship among them.
- 2 Different methods of classification of microbes and study of Bacteria, Fungi, virus, Rickettsiae, Spirochetes.
- 3 Nutritional requirements, growth and cultivation of bacteria and virus. Study of different important media required for the growth of aerobic and anaerobic bacteria & fungi. Differential media, enriched media and selective media, maintenance of lab cultures.
- 4 Different methods used in isolation and identification of bacteria with emphasis to different staining techniques and biochemical reactions. Counting of bacteria -Total and Viable counting techniques.
- 5 Detailed study of different methods of sterilization including their merits and demerits. Sterilization methods for all pharmaceutical products. Detailed study of sterility testing of different pharmaceutical preparations. Brief information on Validation.
- 6 Disinfectants- Study of disinfectants, antiseptics, fungicidal and virucidal agents- factors affecting their activation and mechanism of action. Evaluation of bactericidal, bacteristatic, virucidal activities, evaluation of preservatives in pharmaceutical preparations.
- 7 Immunology- Immunity. Definition, Classification, General principles of natural immunity. Phagocytosis, acquired immunity(active and passive). Antigens, chemical nature of antigens structure and formation of Antibodies, Antigen-Antibody reactions. Bacterial exotoxins and endotoxins. Significance of toxoids in active immunity. Immunization programme, and importance of booster dose.
- 8 Diagnostic tests : Schick's Test, Elisa test, Western Blot test, Southern Blot PCR Widai, QBC, Mantoux Peripheral smear. Study of malarial parasite.
- 9 Microbial culture sensitivity Testing: Interpretation of results Principles and methods of different microbiological assays, microbiological assay of Penicillin, Streptomycin and vitamin B₂ and B₁₂. Standardisation of vaccines and sera.
- 10 Study of infectious diseases: Typhoid, Tuberculosis, Malaria, Cholera, Hepatitis, Meningitis, Syphilis & Gonorrhea and HIV.

2.2 PHARMACEUTICAL MICROBIOLOGY (PRACTICAL)

Practical : 3 Hrs./Week

Title of the Experiment:

- 1 Study of apparatus used in experimental microbiology*.
- 2 Sterilisation of glass ware's. Preparation of media and sterilisation.*
- 3 Staining techniques – Simple staining. ; Gram's staining ; Negative staining**
- 4 Study of motility characters*.
- 5 Enumeration of micro-organisms (Total and Viable)*
- 6 Study of the methods of isolation of pure culture.*
- 7 Bio chemical testing for the identification of micro*-organisms.



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- 8 Cultural sensitivity testing for some micro-organisms.*
- 9 Sterility testing for powders and liquids.*
- 10 Determination of minimum inhibitory concentration.*
- 11 Microbiological assay of antibiotics by cup plate method.*
- 12 Microbiological assay of vitamins by Turbidometric method**
- 13 Determination of RWC.**
- 14 Diagnostic tests for some common diseases, Widal, malarial parasite.**

* Indicate minor experiment & ** indicate major experiment

Assignments:

- 1 Visit to some pathological laboratories & study the activities and equipment/instruments used and reporting the same.
2. Visit to milk dairies (Pasturization) and microbial laboratories (other sterilization methods) & study the activities and equipment/instruments used and reporting the same.
3. Library assignments.
 - a. Report of recent microbial techniques developed in diagnosing some common diseases.
 - b. Latest advancement developed in identifying, cultivating & handling of microorganisms.

Format of the assignment:

1. Minimum & Maximum number of pages.
2. It shall be computer draft copy.
3. Reference(s) shall be included at the end.
4. Name and signature of the student.
5. Assignment can be a combined presentation at the end of the academic year.
6. Time allocated for presentation may be 8+2 Min.

Scheme of Practical Examination:

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of Pharmaceutical Microbiology

Name: Amalakota Lalasa

PIN No. 223G1T0002

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. Amalakota Lalasa

a student of Pharm-D with Regd. No. 223G1T0002

*in the Pharmaceutical Microbiology
Laboratory during the year 2023-2024*

No. of Experiments Conducted 27

No. of Experiments Attended 26

G. Soujanya
Signature - Faculty incharge

Signature-Head of the Department

Aditya Pharmacy College
Kakinada - 533 437

Submitted for the practical examination held on

H. Venkatesh
Examiner-1

G. Soujanya
Examiner-2



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.)	9-10-23	Introduction to microbiology	1 to 4	S
2.)	16-10-23	Common Laboratory rules & regulations for safety.	5 to 7	S
3.)	30-10-23	Study of apparatus used in pharmaceutical microbiology laboratory.	8 to 17	S
4.)	6-11-23	Preparation and sterilization of Nutrient Broth.	18 to 20	S
5.)	20-11-23	Preparation and sterilization of Nutrient Agar.	21 to 23	S
6.)	27-11-23	Culture transfer techniques.	24 to 27	S
7.)	4-12-23	Techniques for isolation of pure culture from mixed culture.	28 to 31	S
8.)	11-12-23	Preparation of Bacterial Smear.	32 to 33	S
9.)	18-12-23	Simple staining	34 to 36	S
10.)	8-1-24	Grams staining	37 to 38	S
11.)	22-1-24	Acid fast staining	39 to 40	S
12.)	29-1-24	IMUIC Test	41 to 45	S
13.)	5-2-24	Microscopic Examination of living bacteria by hanging drop method.	46 to 47	S
14.)	12-2-24	Sterilization by autoclave & test for sterility.	48 to 49	S
15.)	19-2-24	Sterilization by autoclave dry heat and test for sterility.	50 to 51	S



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
16)	26-2-24	Test for sterility of surgical dressing.	52 to 53	S
17)	4-3-24	Viable Count.	54 to 55	S
18)	11-3-24	Microbial assay of Amikacin by Cup plate method.	56 to 57	S
19)	18-3-24	Microbial assay of Terramycin by turbidometric method.	58 to 60	S
20)	1-4-24	ELISA	61 to 63	S
21)	8-4-24	Western blotting	64 to 67	S
22)	15-4-24	Vaccines and general requirements.	68 to 69	S
23)	22-4-24	Widal test.	70 to 72	S
24)	29-4-24	Diagnosis tests for determination of Malarial parasite.	73 to 80	S
25)	6-5-24	Gelatin liquefaction	81 to 82	S
26)	13-5-24	Starch hydrolysis	83 to 84	S
27)	20-5-24	Nitrate reduction test	85 to 87	S



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2.3 PHARMACOGNOSY & PHYTOPHARMACEUTICALS (PRACTICAL)

Practical : 3 Hrs./Week

General Requirements: Laboratory Napkin, Observation Book 150 pages Zero brush, Needle, Blade, Match box.

List of experiments:

- 1 Introduction of Pharmacognosy laboratory and experiments.
- 2 Study of cell wall constituents and cell inclusions.
- 3 Macro, powder and microscopic study of Datura.
- 4 Macro, powder and microscopic study of Senna.
- 5 Macro, powder and microscopic study of Cassia.cinnamon.
- 6 Macro, powder and microscopic study of Cinchona.
- 7 Macro, powder and microscopic study of Ephedra.
- 8 Macro, powder and microscopic study of Quassia.
- 9 Macro, powder and microscopic study of Clove
- 10 Macro, powder and microscopic study of Fennel.
- 11 Macro, powder and microscopic study of Coriander.
- 12 Macro, powder and microscopic study of Isapgol.
- 13 Macro, powder and microscopic study of Nux vomica.
- 14 Macro, powder and microscopic study of Rauwolfia.
- 15 Macro, powder and microscopic study of Liquorice.
- 16 Macro, powder and microscopic study of Ginger.
- 17 Macro, powder and microscopic study of Podophyllum.
- 18 Determination of Iodine value.
- 19 Determination of Saponification value and unsaponifiable matter.
- 20 Determination of ester value.
- 21 Determination of Acid value.
- 22 Chemical tests for Acacia.
- 23 Chemical tests for Tragacanth.
- 24 Chemical tests for Agar.
- 25 Chemical tests for Starch.
- 26 Chemical tests for Lipids.(castor oil,sesame oil, shark liver oil,bees wax)
- 27 Chemical tests for Gelatin.

Scheme of Practical Examination:

	Sessionals	Annual
Identification	04	10
Synopsis	04	10
Major Experiment	07	20
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance.



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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of

Pharmacognosy & phytopharmaceuticals

Name: N. Thansi

PIN No. 22361T0021

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. Naganabhylna Thansi

a student of II pharm.D. with Regd. No. 22361T0021

in the pharmacognosy Laboratory during the year 2023-2024

No. of Experiments Conducted 18

No. of Experiments Attended 17

Signature - Faculty incharge 10/06/2024

Signature-Head of the Department
Aditya Pharmacy College
SURAMPALM-533 437

Submitted for the practical examination held on



Signature H. H. Chatterjee
Examiner-1 27/6/24

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SURAMPALM-533 437

Signature 27/6/24
Examiner-2

Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	9/10/23	Study of compound Microscope	1-5	<i>P.</i> 17/1/23
2.	17/10/23	Macroscopy, Microscopy and powdered microscopic study of ferrel.	6-8	} <i>P.</i> 10/11/23
3.	24/11/23	Macroscopy, Microscopy & powdered microscopy of clove	9-12	
4.	10/11/23	Macroscopy, Microscopy and powdered microscopic study of cinnamon.	13-16	} <i>P.</i> 1/2/23
5.	1/12/23	Macroscopy, Microscopy and powdered microscopic study of Datura.	17-20	
6.	22/12/23	Macroscopy, Microscopy and powdered microscopic study of Senna	21-24	} <i>P.</i> 2/2/24
7.	2/2/24	Macroscopy, Microscopy and powdered microscopic study of Ephedra	25-26	
8.	9/2/24	Macroscopy, microscopy & powdered microscopic study of Quassia	27-29	<i>P.</i> 9/2/24
9.	9/2/24	Macroscopy, microscopy & powdered microscopic study of Nux-vomica	30-32	<i>P.</i> 9/2/24
10.	16/2/24	Macroscopy, Microscopy and powdered microscopic study of Rauwolfia	33-35	<i>P.</i> 22/5/24



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
110.	22/3/24	Determination of Soaponification value (s) saponification number of given oil	36-37	15/3/24
12.	22/3/24	Determination of Acid value of coconut oil	38-	
13.	15/3/24	chemical test for starch	39	5/4/24
14.	22/3/24	chemical test for Acacia	40-41	
15.	5/4/24	chemical test for Trogaranth	42-43	12/4/24
16.	12/4/24	Chemical test for Agar	44-45	
17.	19/4/24	Chemical test for Gelatin	46-47	23/5/24
18.	26/4/24	chemical test for lipids.	48-49	



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3. Detailed syllabus and lecture wise schedule :

Etiopathogenesis and pharmacotherapy of diseases associated with following systems/ diseases

Title of the topic

- 1 **Cardiovascular system:** Hypertension, Congestive cardiac failure, Angina Pectoris, Myocardial infarction, , Hyperlipidaemias , Electrophysiology of heart and Arrhythmias
- 2 **Respiratory system :** Introduction to Pulmonary function test, Asthma, Chronic obstructive airways disease, Drug induced pulmonary diseases
Endocrine system : Diabetes, Thyroid diseases, Oral contraceptives, Hormone replacement therapy, Osteoporosis
- 3 **General prescribing guidelines for**
 - a. Paediatric patients
 - b. Geriatric patients
 - c. Pregnancy and breast feeding
- 4 **Ophthalmology:** Glaucoma, Conjunctivitis- viral & bacterial
- 5 **Introduction to rational drug use**
Definition, Role of pharmacist Essential drug concept Rational drug formulations

2.6 PHARMACOTHERAPEUTICS - I (PRACTICAL)

Practical : 3 Hrs./Week

Practicals :

Hospital postings in various departments designed to complement the lectures by providing practical clinical discussion; attending ward rounds; follow up the progress and changes made in drug therapy in allotted patients; case presentation upon discharge. Students are required to maintain a record of cases presented and the same should be submitted at the end of the course for evaluation. A minimum of 20 cases should be presented and recorded covering most common diseases.

Assignments :

Students are required to submit written assignments on the topics given to them. Topics allotted should cover recent developments in drug therapy of various diseases. A minimum of THREE assignments [1500 – 2000 words] should be submitted for evaluation.



Format of the assignment:

1. Minimum & Maximum number of pages.
2. Reference(s) shall be included at the end.
3. Assignment can be a combined presentation at the end of the academic year.
4. It shall be computer draft copy.
5. Name and signature of the student.
6. Time allocated for presentation may be 8+2 Min.

Scheme of Practical Examination:

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).




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Aditya Pharmacy College
SURAMPALAM-533 437



ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of PHARMACOTHERAPEUTICS-I

Name: CH. VEERA VENI

PIN No. 223G1T0031

*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. CHAPPIDI VEERA VENI

a student of IInd PHARM-D with Regd. No. 223G1T0031

in the pharmaco- Laboratory during the year 2023-2024
therapeutics I

No. of Experiments Conducted 20

No. of Experiments Attended 20

Signature - Faculty incharge

Signature-Head of the Department

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Aditya Pharmacy College
SURAMPALAM-533 437

Submitted for the practical examination held on

Examiner-1

Examiner-2



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SURAMPALAM-533 437

Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	7/11/23	Introduction to the soap format	1-3	}
2.	14/11/23	Renal Calculi with Hypertension & Diabetes	4-11	
3.	21/11/23	Nephrotic Syndrome	12-16	
4.	28/11/23	Polyarthritis	17-20	
5.	5/12/23	Cerebral Palsy with Refractory seizures	21-23	
6.	26/12/23	Thalassemia	24-25	}
7.	2/1/24	Bronchiolitis and respiratory distress	26-28	
8.	9/1/24	Juvenile Rheumatoid arthritis	29-32	
9.	10/1/24	Facial Nerve Palsy	33-37	}
10.	23/2/24	Colloid Goitre	38-41	
11.	30/2/24	Pneumonia	42-46	}
12.	6/2/24	Cerebrovascular Accident	47-50	
13.	13/2/24	Pulmonary Tuberculosis	51-54	
14.	20/2/24	Falciparum malaria	55-58	
15.	27/2/24	Diabetic ketoacidosis with seizures	59-62	}
16.	19/3/24	Toxic Epidermal Necrolysis	63-66	
17.	26/3/24	Thrombocytopenia	67-70	
18.	2/4/24	Inguinal Hernia	71-73	
19.	16/4/24	Parkinsonism	74-76	
20.	23/4/24	Chronic osteomyelitis	77-79	
21.	7/5/24	Proapsed Intervertebral Disc (PVD)	80-82	



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3.1 PHARMACOLOGY – II (PRACTICAL)

Practical : 3 Hrs./Week

List of Experiments:

1. Study of laboratory animals and their handling (a. Frogs, b. Mice, c. Rats, d. Guinea pigs, e. Rabbits).
2. Study of physiological salt solutions used in experimental pharmacology.
3. Study of laboratory appliances used in experimental pharmacology.
4. Study of use of anesthetics in laboratory animals.
5. To record the dose response curve of Ach using isolated ileum/rectus abdominis muscle preparation.
6. To carry out bioassay of Ach using isolated ileum/rectus abdominis muscle preparation by interpolation method.
7. To carry out bioassay of Ach using isolated ileum/rectus abdominis muscle preparation by three point method.
8. To record the dose response curve of Histamine using isolated guinea-pig ileum preparation.
9. Study of agonistic and antagonistic effects of drugs using isolated guinea-pig ileum preparation.
10. To carry out bioassay of Histamine using isolated guinea-pig ileum preparation by interpolation method.
11. To carry out bioassay of Histamine using guinea-pig ileum preparation by three point method.
12. To study the routes of administration of drugs in animals (Rats, Mice, Rabbits).
13. Study of theory, principle, procedure involved and interpretation of given results for the following experiments:
 - a) Analgesic property of drug using analgesiometer.
 - b) Antiinflammatory effect of drugs using rat-paw edema method.
 - c) Anticonvulsant activity of drugs using maximal electroshock and pentylene tetrazole methods.
 - d) Antidepressant activity of drugs using pole climbing apparatus and pentobarbitone induced sleeping time methods.
 - e) Locomotor activity evaluation of drugs using actophotometer and rotorod.
 - f) Cardiotonic activity of drugs using isolated frog heart and mammalian heart preparations.

Scheme of Practical Examination:

	Sessionals	Annual
Identification	02	10
Synopsis	04	10
Major Experiment (Bioassay)	08	30
Minor Experiment (Interpretation of given Graph or simulated experiment)	04	10
Viva	02	10
Max Marks	20	70
Duration	3hrs	4hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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Aditya Pharmacy College
SURAMPALAM-533 437



ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of
Pharmacology

Name: A. Sri Satya Shinney

PIN No. 213G1T0001

*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. A. Sri Satya Shinney

a student of III - Pharm.D with Regd. No. 213G1T0001

in the Pharmacology-II Laboratory during the year 2023-24

No. of Experiments Conducted 20

No. of Experiments Attended 20

Signature - Faculty incharge

Signature-Head of the Department

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM-533 437

Submitted for the practical examination held on 08.15.24

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM-533 437

Examiner-1

Examiner-2



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ADITYA PHARMACY COLLEGE(A)
SURAMPALEM

Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
	10/8/23	Introduction	1	
1.	17/8/23	Study of laboratory animals and their handling	2-6	Phe
2.	24/8/23	Study of physiological salt solution used in the pharmacological experiments	7-8	
3.	8/9/23	Study of Appliances used in experimental pharmacology	9-11	
4.	15/9/23	Study of use of anaesthetics in laboratory animals	12-15	Phe
5.	22/9/23	Dose response curve of Ach on frog rectus abdominus muscle	16-17	
6.	29/9/23	Inhibition of Ach by Lidocaine on chick ileum	18-19	
7.	5/10/23	Potentiation of Ach by Neostigmine on chick ileum	20-21	Phe
8.	26/10/23	BioAssay of Ach by using chick ileum by matching method	22	
9.	2/11/23	BioAssay of Ach by interpolation method using chick ileum	23-24	
10.	16/11/23	BioAssay of Ach by two point method using chick ileum	25-26	Phe
11.	23/11/23	BioAssay of Ach by three point method using chick ileum	27-28	
12.	30/11/23	Complete inhibition of Ach by pancuronium on chick ileum	29-30	
13.	7/12/23	Evaluation of muscle relaxant property of diazepam using apparatus	31-32	



Painter

S.No.	Date	Name of the Experiment	Page No.	Remarks
14.	21/12/23	Analgesic effect of paracetamol in Mice using eddy's hot plate method	33 - 34	ph
15.	4/1/24	Evaluation of CNS depressant property of chlorpromazine using actophotometer	35 - 36	
16.	11/2/24	Anti-inflammatory effect of drugs using rat paw edema method	37 - 39	
17.	15/2/24	Anticonvulsant activity of phenytoin against maximal electroshock induced convulsions	40 - 42	
18.	22/2/24	Anticonvulsant activity of diazepam against pentylenetetrazole induced clonic convulsions	43 - 44	Ph
19.	7/3/24	Study of different routes of drug administration	45 - 47	
20.	21/3/24	Cardiotonic activity of drugs using isolated frog heart preparation	48 - 50	



- **Fluorimetric Analysis:** Theory, luminescence, factors affecting fluorescence, quenching. Instrumentation, Applications, fluorescent indicators, study of pharmaceutically important compounds estimated by fluorimetry.
- b. **Flame Photometry:** Theory, nebulisation, flame and flame temperature, interferences, flame spectrometric techniques and instrumentation and pharmaceutical applications.
- c. **Atomic Absorption Spectrometry:** Introduction, Theory, types of electrodes, instrumentation and applications.
- d. **Atomic Emission Spectroscopy:** Spectroscopic sources, atomic emission spectrometers, photographic and photoelectric detection.
- e. **NMR & ESR (introduction only):** Introduction, theoretical aspects and applications.
- f. **Mass Spectroscopy: (Introduction only)** – Fragmentation, types of ions produced mass spectrum and applications.
- g. **Polarimetry: (Introduction only)** – Introduction to optical rotatory dispersion, circular dichroism, polarimeter.
- h. **X-RAY Diffraction: (Introduction only)** – Theory, reciprocal lattice concept, diffraction patterns and applications.
- i. **Thermal Analysis:** Introduction, instrumentation, applications, and DSC and DTA.

3.2 PHARMACEUTICAL ANALYSIS (PRACTICAL)

Practical : 3 Hrs./Week

List of Experiments:

1. Separation and identification of Amino Acids by Paper Chromatography.
2. Separation and identification of Sulpha drugs by TLC technique.
3. Effect of pH and solvent on the UV spectrum of given compound.
4. Comparison of the UV spectrum of a compound with that of its derivatives.
5. Determination of dissociation constant of indicators using UV-Visible spectroscopy.
6. Conductometric titration of mixture of acids with a strong base.
7. Potentiometric titration of an acid with a strong base.
8. Estimation of drugs by Fluorimetric technique.
9. Study of quenching effect in fluorimetry.
10. Colourimetric estimation of Sulpha drugs using BMR reagent.



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11. Simultaneous estimation of two drugs present in given formulation.
12. Assay of Salicylic Acid by colourimetry.
13. Determination of Chlorides and Sulphates in Calcium gluconate by Nepheloturbidimetric Method.
14. Determination of Na/K by Flame Photometry.
15. Determination of pKa using pH meter.
16. Determination of specific rotation.
17. Comparison of the IR spectrum of a compound with that of its derivatives.
18. Demonstration of HPLC.
19. Demonstration of HPTLC.
20. Demonstration of GC-MS.
21. Demonstration of DSC.
22. Interpretation of NMR spectra of any one compound.

Reference Books:

1. Text Book of Pharm. Analysis by Higuchi. T and Hasen. E. B., New York Inter Science Publishers.
2. Quantitative Pharma. Analysis by Jenkins, The Blakiston division, New York.
3. Quantitative Drug Analysis, by Garrot. D, Chapman & Hall Ltd., London.
4. Undergraduate Instrumental Analysis by James. E., CBS Publishers.
5. Instrumental Analysis by Willard and Merritt, EWP, East West Press Ltd., Delhi/Madras.
6. Pharm Analysis by Skoog and West, Sounders Manipal College Publishing.
7. Text Book of Chemical Analysis, by A.I.Vogel, ELBS with Macmillan press, Hampshire.
8. Textbook of Pharm. Analysis by K.A.Connors, John Wiley & Sons, New York, Brisbane, Singapore.
9. Textbook of Pharm. Analysis (Practical) by Beckett & Stenlake, CBS Publishers, Delhi.
10. Textbook of Drug Analysis by P.D. Sethi., CBS Publishers, Delhi.
11. Spectroscopy by Silverstein, John & Wiley & Sons. Inc., Canada & Singapore.
12. How to practise GMP-A Plan for total quality control by P.P. Sharma, Vandana Publications, Agra.
13. The Science & Practice of Pharmacy by Remington Vol-I & II, Mack Publishing Co. Pennsylvania.
14. TLC by Stahl, Spring Verlay.
15. Text Book of Pharm. Chemistry by Chatten, CBS Publications.
16. Spectroscopy by William Kemp, ELBS with Macmillan Press, Hampshire.
17. I.P.-1996, The Controller of Publications, New Delhi.
18. BPC- Dept. of Health, U.K. for HMSO.
19. USP - Mack Publishing Co., Easton, PA.
20. The Extra Pharmacopoeia – The Pharm. Press, London.



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Aditya Pharmacy College
SURAMPALAM-533 437



ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of Pharmaceutical Analysis

Name: B. Sri Krishna Veni

PIN No. 213G1T0003

*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. B. Sri Krishna Veni

a student of III-Pharm.D *with Regd. No.* 213G1T0003

in the Pharmaceutical Analysis *Laboratory during the year* 2023-24

No. of Experiments Conducted 25

No. of Experiments Attended 25

Signature - Faculty incharge

Signature - Head of the Department

Aditya Pharmacy College

SURAMPALAM-533 437

Submitted for the practical examination held on 09-05-24

Examiner-1

Examiner-2

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SURAMPALAM-533 437



Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	8/8/23	Introduction	1-4	(B) 22/8/23
1.	22/8/23	Identification of Amino acid by Ascending paper chromatography	5-8 At	(B) 29/08/23
2.	29/8/23	Identification of Amino acid by Radial paper chromatography	9-12 At	(B) 05/09/23
3.	5/9/23	Identification of metronidazole in a given sample Ascending paper chromatography	13-15 At	(B) 12/09/23
4.	12/9/23	Preparation of thin layer chromatographic plates	16-17 At	(B) 19/09/23
5.	19/9/23	Identification of Sulphonamide by thin-layered chromatography	18-19 At	(B) 26/09/23
6.	26/9/23	Introduction to UV Visible Spectroscopy	20-25	(B) 03/10/23
6.	26/9/23	Determination of absorption maxima of $KMnO_4$	26-27 At	(B) 3/10/23
7.	3/10/23	Estimation of salicylic acid by Calibration curve by colorimetry	28-29 At	(B) 10/10/23
8.	10/10/23	Assay of Paracetamol by using specific absorbance	30-31 At	(B) 10/10/23
9.	7/11/23	Assay of paracetamol by chemical derivatization method	32-34 At	(B) 14/11/23
10.	14/11/23	Assay of salicylic acid using direct comparison method	35-36 At	(B) 12/12/23

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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
11.	21/11/23	Estimation of Sulphanilamide eye drops by colorimetry	37-39 At	B 12/12/2023
12.	28/11/23	Effect of PH absorption Spectrum of Sulpanilamide	40-41 At	B 12/12/2023
13.	12/12/23	Simultaneous estimation of caffeine & sodium benzoate using simultaneous equation method	42-43 At	B 26/12/2023
14.	19/12/23	Estimation of quinine sulphate by Fluorimetry	44-45 At	B 21/01/2024
15.	26/12/23	Determination of Nations in unknown sample by Flame photometry	46-47 At	B 21/01/2024
16.	21/1/24	Determination of K ⁺ ions in unknown sample by Flame photometry	48-49 At	B 09/02/2024
17.	9/1/24	Estimation of Sulphates by Nephelometry	50-53 At	B 09/02/2024
18.	23/1/24	Potentiometric titration of Strong acid with strong base	54-55 At	B 09/02/2024
19.	8/2/24	Determination of PK ^a of Aspirin by PH meter	56-57 At	B 20/02/2024
20.	13/2/24	Calibration of conductivity meter	58-60 At	B 05/03/2024
21.	20/2/24	Conductometric titration of Strong Acid vs Strong base	61-62 At	B 05/03/2024
22.	27/2/24	Column chromatography	63-64 At	B 12/03/2024
23.	5/3/24	Standard operating procedure for HPLC	65-67	B 26/03/2024
24.	12/3/24	Standard operating procedure for GAS chromatography	68-69	B 26/03/2024
25.	12/3/24	Interpretation of IR spectra	70-71	B 26/03/2024

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- 4 **Oncology:** Basic principles of Cancer therapy, General introduction to cancer chemotherapeutic agents, Chemotherapy of breast cancer, leukemia. Management of chemotherapy nausea and emesis
- 5 **Dermatology:** Psoriasis, Scabies, Eczema, Impetigo

3.3 PHARMACOTHERAPEUTICS – II (PRACTICAL)

Practical : 3 Hrs./Week

Practicals :

Hospital postings in various departments designed to complement the lectures by providing practical clinical discussion; attending ward rounds; follow up the progress and changes made in drug therapy in allotted patients; case presentation upon discharge. Students are required to maintain a record of cases presented and the same should be submitted at the end of the course for evaluation.

The student shall be trained to understand the principle and practice involved in selection of drug therapy including clinical discussion.

A minimum of 20 cases should be presented and recorded covering most common diseases.

Assignments :

Students are required to submit written assignments on the topics given to them. Topics allotted should cover recent developments in drug therapy of various diseases. A minimum of THREE assignments [1500 – 2000 words] should be submitted for evaluation.

Format of the assignment :

1. Minimum & Maximum number of pages.
2. Reference(s) shall be included at the end.
3. Assignment can be a combined presentation at the end of the academic year.
4. It shall be computer draft copy.
5. Name and signature of the student.
6. Time allocated for presentation may be 8+2 Min.

Scheme of Practical Examination :

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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Aditya Pharmacy College
SURAMPALEM-533 437



ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of
PHARMACY PRACTICE

Name: Kavya

PIN No. 2136170014

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. Kavya Naga Praveena. J

a student of III Pharm D with Regd. No. 2136170014

in the Therapeutics Laboratory during the year 2023-24

No. of Experiments Conducted 20

No. of Experiments Attended 20

Signature - Faculty incharge

Signature-Head of the Department
PRINCIPAL

Aditya Pharmacy College

SURAMPALEM-533 437

Submitted for the practical examination held on 02/05/2024

Examiner-1

Examiner-2



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SURAMPALEM-533 437







Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	25/8/23	A CASE STUDY ON DENGUE FEVER	1-5	
2.	14/9/23	A CASE STUDY ON HIV ASSOCIATED WITH CAD	6-9	
3.	21/9/23	A CASE STUDY ON INFECTIVE ENDOCARDITIS	10-12	
4.	5/10/23	A CASE STUDY ON ACUTE HEPATITIS WITH FEVER	13-17	
5.	12/10/23	A CASE STUDY ON ACUTE EXACERBATION OF COPD WITH TYPE-II DM	18-21	
6.	9/11/23	A CASE STUDY ON LEFT KNEE OSTEOARTHRITIS	22-24	
7.	16/11/23	A CASE STUDY ON ACUTE PANCREATITIS	25-28	
8.	23/11/23	A CASE STUDY ON DIABETIC KETOACIDOSIS, DM	29-34	
9.	7/12/23	A CASE STUDY ON COMMUNITY ACQUIRED PNEUMONIA, CABG/CAVR	35-39	
10.	14/12/23	A CASE STUDY ON CHRONIC LIVER DISEASE	40-43	
11.	28/12/23	A CASE STUDY ON CKD STAGE-II WITH UREMIA & METABOLIC ACIDOSIS, DEEP VEIN THROMBOSIS	44-48	
12.	11/01/24	A CASE STUDY ON SEPTIC SHOCK, AKI	49-52	
13.	25/01/24	A CASE STUDY ON CHOLELITHIASIS SICKLE CELL ANAEMIA	53-56	
14.	15/2/24	A CASE STUDY ON ACUTE	57-60	



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
		CORONARY SYNDROME, IAMI, MODERATE LV DYSFUNCTION		
15.	22/2/24	A CASE STUDY ON HYPONATREMIA, CAD, THYROID DYSFUNCTION	61-63	
16.	29/2/24	A CASE STUDY ON ACUTE NEPHROTIC SYNDROME	64-67	
17.	7/3/24	A CASE STUDY ON CHOLANGIO CARCINOMA	68-70	
18.	21/3/24	A CASE STUDY ON METASTATIC HODKIN'S LYMPHOMA	71-74	
19.	4/4/24	A CASE STUDY ON DM WITH ANEMIA	75-77	
20.	18/4/24	A CASE STUDY ON NORMAL PRESSURE HYDROCEPHALUS	78-80	



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3.5 MEDICINAL CHEMISTRY (PRACTICAL)

Practical : 3 Hrs./Week

1. Assays of important drugs from the course content.
2. Preparation of medicinally important compounds or intermediates required for synthesis of drugs.
3. Monograph analysis of important drugs.
4. Determination of partition coefficients, dissociation constants and molar refractivity of compounds for QSAR analysis.

Reference Books:

- a. Wilson and Gisvold's Text book of Organic, Medicinal and Pharmaceutical Chemistry, Lippincott-Raven Publishers-New York, Philadelphia.
- b. William.O.Foye, Principles of Medicinal Chemistry, B.I. Waverly Pvt. Ltd., New Delhi.
- c. Burgers, Medicinal Chemistry, M.E., Welly Med.Chemistry M.E. Walffed Johnwiley and Sons, Wiley-interscience Publication, New York, Toranto.
- d. A Text Book of Medicinal Chemistry Vol. I and II by Surendra N. Pandeya, S.G. Publisher, 6, Dildayal Nagar, Varanasi -10.
- e. Indian Pharmacopoeia 1985 and 1996. The Controller of Publications, Civil Lines, Delhi - 54.
- f. Current Index of Medical Specialities (CIMS) and MIMS India, MIMS, A.E. Morgan Publications (I) Pvt. Ltd, New Delhi-19.
- g. Organic Drug Synthesis-Ledniser Mitzsher Vol. I and II.
- h. Pharmaceutical Chemistry drug Synthesis Vol. I and II by H. J. Roth and A. Kleemann.
- i. The Science and Practice of Pharmacy Vol. 1 and 2, Remington, MACK Publishing Company, Easton, Pennsylvania.



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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of Medicinal Chemistry

Name: Dona

PIN No. 21341T0009

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. A. Dona Satya Sriharsha

a student of III PharmD with Regd. No. 21341T0009

in the M. Chemistry Laboratory during the year 2023-24

No. of Experiments Conducted 21

No. of Experiments Attended 20

Signature - Faculty incharge
13/4/24

Signature-Head of the Department
PRINCIPAL
Aditya Pharmacy College
SURAMPALAM-533 437

Submitted for the practical examination held on

Examiner-1
10.05.24

Examiner-2



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SURAMPALAM-533 437

Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	14/8/23	Preparation of Benzocaine	1-2	Si
2.	21/8/23	Preparation of 7-hydroxy, 4-methyl coumarin	3-4	Si
3.	28/8/23	Preparation of Benzimidazole	5-6	Si
4.	4/9/23	Preparation of Benzotriazole	7-8	Si
5.	11/9/23	Preparation of Fluorescein	9-10	Si
6.	18/9/23	Preparation of 5,5-diphenyl hydantoin	11-11	Si
7.	25/9/23	Preparation of 2,3 diphenyl quinoxaline	12-13	Si
8.	9/10/23	Preparation of Benzoic acid	14-15	Si
9.	6/11/23	Assay of Ascorbic Acid	16-17	Si
10.	20/11/23	Assay of Sulphanilamide	18-19	Si
11.	27/11/23	Assay of Benzocaine	20-21	Si
12.	4/12/23	Assay of Chloroquine Phosphate	22-23	Si
13.	11/12/23	Assay of Dapsone	24-26	Si
14.	18/12/23	Assay of Diclofenac sodium	27-28	Si
15.	8/1/24	Assay of Isoniazid	29-30	Si
16.	22/1/24	Assay of Metronidazole	31-32	Si
17.	12/2/24	Identification of Ascorbic Acid	33-34	Si
18.	19/2/24	Identification of Benzocaine	35-35	Si
19.	26/2/24	Identification of Isoniazid	36	Si
20.	4/3/24	Identification of Metronidazole	37	Si
21.	11/3/24	Identification of Sulphanilamide	38	Si
22.	1/4/24	QSAR Studies	39-44	Si



3.6 PHARMACEUTICAL FORMULATIONS (PRACTICAL)

Practical : 3 Hrs./Week

List of Experiments :

1. **Manufacture of Tablets**
 - a. Ordinary compressed tablet-wet granulation
 - b. Tablets prepared by direct compression.
 - c. Soluble tablet.
 - d. Chewable tablet.
2. **Formulation and filling of hard gelatin capsules**
3. **Manufacture of parenterals**
 - a. Ascorbic acid injection
 - b. Calcium gluconate injection
 - c. Sodium chloride infusion.
 - d. Dextrose and Sodium chloride injection/ infusion.
4. **Evaluation of Pharmaceutical formulations (QC tests)**
 - a. Tablets
 - b. Capsules
 - c. Injections
5. **Formulation of two liquid oral preparations and evaluation by assay**
 - a. Solution: Paracetamol Syrup
 - b. Antacid suspensions- Aluminum hydroxide gel
6. **Formulation of semisolids and evaluation by assay**
 - a. Salicylic acid and benzoic acid ointment
 - b. Gel formulation Diclofenac gel
7. **Cosmetic preparations**
 - a. Lipsticks
 - b. Cold cream and vanishing cream
 - c. Clear liquid shampoo
 - d. Tooth paste and tooth powders.
8. **Tablet coating (demonstration)**

Scheme of Practical Examination :

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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Aditya Pharmacy College
SURAMPALAM-533 437



ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of PHARMACEUTICAL FORMULATIONS

Name: J. Kavya

PIN No. 21361T0014

*Certified that this is the bonafide record of
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Mr./Ms. Kavya Naga Praveena. Takka

a student of III Pharm D with Regd. No. 21361T0014

in the Pharm. Formulation Laboratory during the year 2023 - 24

No. of Experiments Conducted 20

No. of Experiments Attended 18

Signature - Faculty Incharge

Signature-Head of the Department

PRINCIPAL
Aditya Pharmacy College

Submitted for the practical examination held on SURAMPALEM-533 437

E. Usharani
Examiner-1

[Signature]
Examiner-2



PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437

Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
	19/8/23	Introduction	1-4	(R)
1.	26/8/23	Formulation of paracetamol tablets by wet granulation Method.	5-7	(R)
2.	2/9/23	Evaluate the formulated paracetamol tablets.	8-11	(R)
3.	16/9/23	Formulation of Diclofenac sodium tablets by direct compression Method	12-13	(R)
4.	30/9/23	Formulation of soluble Acetyl salicylic acid tablets	14-15	(R)
5.	30/9/23	Formulation of chewable laxative tablets.	16-17	(R)
6.	14/10/23	Formulation and filling of Hard gelatin capsules	18-20	(R)
		Introduction	21-22	(R)
7.	14/10/23	Formulation of Ascorbic acid Injection	23-25	(R)
8.	16/10/23	Formulation of calcium gluconate injection	26	(R)
9.	11/11/23	Formulation of sodium chloride injection	27	(R)
10.	18/11/23	Formulation of Dextrose and sodium chloride infusion	28	(R)
11.	9/12/23	Evaluation of paracetamol syrup and Assay	29-32	(R)
12.	16/12/23	Preparation of cold cream	33	(R)
13.	16/12/23	Preparation of vanishing cream	34	(R)
14.	23/12/23	Preparation of Tooth powder	35	(R)



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SURAMPALAM-533 437

Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
15.	28/12/23	Preparation of liquid shampoo	36 - 37	Ⓚ
16.	6/1/24	Formulation of Aluminium hydroxide gel Antacid suspension	38 - 40	Ⓚ
17.	27/1/24	Preparation of lipstick	41 - 43	Ⓚ
18.	17/2/24	Formulation of salicylic acid and benzoic acid ointment	44 - 45	Ⓚ
19.	24/2/24	Formulation of Diclofenac sodium gel and evaluation by Assay	46 - 49	Ⓚ
20.	24/2/24	Preparation of tooth paste	50 - 51	Ⓚ



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SURAMPALEM-533 437

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4.1 PHARMACOTHERAPEUTICS – III (PRACTICAL)

Practical : 3 Hrs./Week

Practicals:

Hospital postings for a period of at least 50 hours is required to understand the principles and practice involved in ward round participation and clinical discussion on selection of drug therapy. Students are required to maintain a record of 15 cases observed in the ward and the same should be submitted at the end of the course for evaluation. Each student should present at least two medical cases they have observed and followed in the wards.

Etiopathogenesis and pharmacotherapy of diseases associated with following systems/ diseases:

Title of the topic

- 1 **Gastrointestinal system:** Peptic ulcer disease, Gastro Esophageal Reflux Disease, Inflammatory bowel disease, Liver disorders - Alcoholic liver disease, Viral hepatitis including jaundice, and Drug induced liver disorders.
- 2 **Haematological system:** Anaemias, Venous thromboembolism, Drug induced blood disorders.
- 3 **Nervous system:** Epilepsy, Parkinsonism, Stroke, Alzheimer's disease,
- 4 **Psychiatry disorders:** Schizophrenia, Affective disorders, Anxiety disorders, Sleep disorders, Obsessive Compulsive disorders
- 5 Pain management including Pain pathways, neuralgias, headaches.
- 6 Evidence Based Medicine

Assignments:

Students are required to submit written assignments on the topics given to them. Topics allotted should cover recent developments in drug therapy of various diseases. A minimum of THREE assignments [1500 – 2000 words] should be submitted for evaluation.

Format of the assignment:

1. Minimum & Maximum number of pages
2. Reference(s) shall be included at the end.
3. Assignment can be a combined presentation at the end of the academic year
4. It shall be computer draft copy
5. Name and signature of the student
6. Time allocated for presentation may be 8+2 Min.

Scheme of Practical Examination :

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



Handwritten signature

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Aditya Pharmacy College
SURAMPALM-533 437



ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.



DEPARTMENT OF

Pharmaco therapeutics - III



Name B. Mounika

PIN No.

2	0	3	6	1	T	0	0	0	3
---	---	---	---	---	---	---	---	---	---

*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. B. Mounika

a student of IV Pharm D with Regd. No. 20361T0003

in the Pharmaco therapeutics-3 Laboratory during the year 2023-2024

No. of Experiments Conducted

18

No. of Experiments Attended

18

Signature - Faculty incharge

Signature - Head of the Department

PRINCIPAL
Aditya Pharmacy College

SURAMPALEM-533 437
08/05/24

Submitted for the Practical examination held on

EXAMINER-1

EXAMINER-2



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SURAMPALEM-533 437

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WIKAS-NLR

5 Hospital pharmacy services

- a) Procurement & warehousing of drugs and Pharmaceuticals
- b) Inventory control
Definition, various methods of Inventory Control
ABC, VED, EOQ, Lead time, safety stock
- c) Drug distribution in the hospital
 - i) Individual prescription method
 - ii) Floor stock method
 - iii) Unit dose drug distribution method
- d) Distribution of Narcotic and other controlled substances
- e) Central sterile supply services – Role of pharmacist

6 Manufacture of Pharmaceutical preparations

- a) Sterile formulations – large and small volume parenterals
- b) Manufacture of Ointments, Liquids, and creams
- c) Manufacturing of Tablets, granules, capsules, and powders
- d) Total parenteral nutrition

7 Continuing professional development programs

Education and training

8 Radio Pharmaceuticals – Handling and packaging**9 Professional Relations and practices of hospital pharmacist****4.2 HOSPITAL PHARMACY (PRACTICAL)**

Practical : 3 Hrs./Week

1. Assessment of drug interactions in the given prescriptions
2. Manufacture of parenteral formulations, powders.
3. Drug information queries.
4. Inventory control

List of Assignments:

1. Design and Management of Hospital pharmacy department for a 300 bedded hospital.
2. Pharmacy and Therapeutics committee – Organization, functions, and limitations.
3. Development of a hospital formulary for 300 bedded teaching hospital
4. Preparation of ABC analysis of drugs sold in one month from the pharmacy.
5. Different phases of clinical trials with elements to be evaluated.
6. Various sources of drug information and systematic approach to provide unbiased drug information.
7. Evaluation of prescriptions generated in hospital for drug interactions and find out the suitable management.



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Special requirements:

1. Each college should sign MoU with nearby local hospital having minimum 150 beds for providing necessary training to the students' on hospital pharmacy activities.
2. Well equipped with various resources of drug information.

Scheme of Practical Examination:

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.



DEPARTMENT OF



Name BOMMETI SARA AISWARYA PIN No. 203G1T0002

*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. Bommeti Sara Aiswarya

a student of IV Pharm D with Regd. No. 203G1T0002

in the Hospital Pharmacy Laboratory during the year 2023-2024

No. of Experiments Conducted 20

No. of Experiments Attended 20

P. Lakshmi
Signature - Faculty Incharge

[Signature]
Signature - Head of the Department
PRINCIPAL

Aditya Pharmacy College
09/05/2024
533 437

Submitted for the Practical examination held on SURAMPALEM

P. Lakshmi
EXAMINER-1

K. Pushra Lakshmi
EXAMINER-2

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POINTER

S.No.	Date	Name of the Experiment	Page No.	Remarks
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1.	28/6/23	Introduction	01-03	} RK
2.	5/7/23	Drug Profile - 1	04-06	
3.	12/7/23	Drug profile - 2	07-09	
4.	19/7/23	Introduction to Parenterals	10-12	} RK
5.	26/7/23	Sodium chloride Injection	13-13	
6.	2/8/23	Dextrose and sodium chloride Infusion	14	
7.	9/8/23	Introduction to powders	15-17	} RK
8.	16/8/23	Oral Rehydration salts	18	
9.	23/8/23	Medicated Gusting powder	19-20	
10.	6/9/23	Introduction to Drug Information Query	21-24	} RK
11.	20/9/23	Drug Information Query	25-27	
12.	4/10/23	Introduction to Drug Interactions	28-32	
13.	18/10/23	Drug Interaction Case study - I	33-34	} RK
14.	1/11/23	Inventory control	35-39	
15.	15/11/23	Inventory case study - I	40	
16.	29/11/23	Inventory case study - II	41-42	} RK
17.	27/12/23	Inventory case study - III	43-44	
18.	10/1/24	Drug profile - 3	45-47	
19.	31/1/24	Drug Information Query - II	48-50	
20.	7/2/24	Drug Interaction Case study - II	51-52	



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3. **Patient data analysis**
The patient's case history, its structure and use in evaluation of drug therapy & Understanding common medical abbreviations and terminologies used in clinical practices.
4. **Clinical laboratory tests used in the evaluation of disease states, and interpretation of test results**
 - a. Haematological, Liver function, Renal function, thyroid function tests
 - b. Tests associated with cardiac disorders
 - c. Fluid and electrolyte balance
 - d. Microbiological culture sensitivity tests
 - e. Pulmonary Function Tests
5. **Drug & Poison information**
 - a. Introduction to drug information resources available
 - b. Systematic approach in answering DI queries
 - c. Critical evaluation of drug information and literature
 - d. Preparation of written and verbal reports
 - e. Establishing a Drug Information Centre
 - f. Poisons information- organization & information resources
6. **Pharmacovigilance**
 - a. Scope, definition and aims of pharmacovigilance
 - b. Adverse drug reactions - Classification, mechanism, predisposing factors, causality assessment [different scales used]
 - c. Reporting, evaluation, monitoring, preventing & management of ADRs
 - d. Role of pharmacist in management of ADR.
7. Communication skills, including patient counselling techniques, medication history interview, presentation of cases.
8. Pharmaceutical care concepts
9. Critical evaluation of biomedical literature
10. Medication errors

4.3 CLINICAL PHARMACY (PRACTICAL)

Practical : 3 Hrs./Week

Students are expected to perform 15 practicals in the following areas covering the topics dealt in theory class.

- a. Answering drug information questions (4 Nos)
- b. Patient medication counselling (4 Nos)
- c. Case studies related to laboratory investigations (4 Nos)
- d. Patient medication history interview (3 Nos)



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Assignment:

Students are expected to submit THREE written assignments (1500 – 2000 words) on the topics given to them covering the following areas dealt in theory class.

Drug information, Patient medication history interview, Patient medication counselling, Critical appraisal of recently published articles in the biomedical literature which deals with a drug or therapeutic issue.

Format of the assignment:

1. Minimum & Maximum number of pages.
2. Reference(s) shall be included at the end.
3. Assignment can be a combined presentation at the end of the academic year.
4. It shall be computer draft copy.
5. Name and signature of the student.
6. Time allocated for presentation may be 8+2 Min.



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ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.

DEPARTMENT OF
Clinical Pharmacy

Name Mounika B PIN No. 203G1T0003

*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. Budati Mounika

a student of IV Pharm D with Regd. No. 203G1T0003

in the Clinical pharmacy Laboratory during the year 2023-24

No. of Experiments Conducted 16

No. of Experiments Attended 13

Signature - Faculty incharge

Signature - Head of the Department

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Aditya Pharmacy College

Submitted for the Practical examination held on 10-5-24 SURAMPALEM-533 437

EXAMINER-1

EXAMINER-2



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POINTER

S.No.	Date	Name of the Experiment	Page No.	Remarks
	21/7/23	Introduction to Drug information queries	1-4	Nandideepika
1)	28/7/23	Drug information query - 1	5-7	
2)	04/8/23	Drug information query - 2	8-9	
3)	18/8/23	Drug information query - 3	10-11	
4)	25/8/23	Drug information query - 4	12-13	
5)	22/9/23	Patient counselling - 1	14-17	
6)	29/9/23	Patient counselling - 2	18-20	
7)	13/10/23	Patient counselling - 3	21-23	
8)	03/11/23	Patient counselling - 4	24-26	
	17/12/23	Introduction to medication history interview	27-30	
9)	29/12/23	Patient medication history interview - 1	31	
10)	5/1/24	Patient medication history interview - 2	32	
11)	2/2/24	Patient medication history interview - 3	33	
12)	9/2/24	Patient medication history interview - 4	34	
	16/2/24	Introduction to Laboratory Data interpretations	35-39	
13)	23/2/24	Laboratory Data interpretations - 1	40-41	
14)	1/3/24	Laboratory Data interpretations - 2	42-43	
15)	15/3/24	Laboratory Data interpretations - 3	44-45	
16)	22/3/24	Laboratory Data interpretations - 4	46-47	



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WIKAS-NLR

4.5 BIOPHARMACEUTICS AND PHARMACOKINETICS (PRACTICAL)

Practical : 3 Hrs./Week

1. Improvement of dissolution characteristics of slightly soluble drugs by some methods.
2. Comparison of dissolution studies of two different marketed products of same drug.
3. Influence of polymorphism on solubility and dissolution.
4. Protein binding studies of a highly protein bound drug and poorly protein bound drug.
5. Extent of plasma-protein binding studies on the same drug (i.e. highly and poorly protein bound drug) at different concentrations in respect of constant time.
6. Bioavailability studies of some commonly used drugs on animal/human model.
7. Calculation of K_a , K_e , $t_{1/2}$, C_{max} , AUC, AUMC, MRT etc. from blood profile data.
8. Calculation of bioavailability from urinary excretion data for two drugs.
9. Calculation of AUC and bioequivalence from the given data for two drugs.
10. In vitro absorption studies.
11. Bioequivalency studies on the different drugs marketed.(eg) Tetracycline, Sulphamethoxazole, Trimethoprim, Aspirin etc., on animals and human volunteers.
12. Absorption studies in animal inverted intestine using various drugs.
13. Effect on contact time on the plasma protein binding of drugs.
14. Studying metabolic pathways for different drugs based on elimination kinetics data.
15. Calculation of elimination half-life for different drugs by using urinary elimination data and blood level data.
16. Determination of renal clearance.

References:

- a. Biopharmaceutics and Clinical Pharmacokinetics by, Milo Gibaldi
- b. Remington's Pharmaceutical Sciences, By Mack Publishing Company, Pennsylvania.
- c. Pharmacokinetics: By Milo Gibaldi Donald, R. Mercel Dekker Inc.
- d. Hand Book of Clinical Pharmacokinetics, By Milo Gibaldi and Laurie Prescott by ADIS Health Science Press.
- e. Biopharmaceutics and Pharmacokinetics; By Robert F Notari
- f. Biopharmaceutics; By Swarbrick
- g. Bio pharmaceutics and Pharmacokinetics-A Treatise, By D. M. Brahmanekar and Sunil B.Jaiswal, Vallabh Prakashan Pitampura, Delhi
- h. Clinical Pharmacokinetics, Concepts and Applications: By Malcolm Rowland and Thomas, N. Tozen, Lea and Febrger, Philadelphia, 1995.
- i. Dissolution, Bioavailability and Bioequivalence, By Abdou H.M, Mack, Publishing Company, Pennsylvania 1989.
- j. Biopharmaceutics and Clinical Pharmacokinetics-An introduction 4th edition Revised and expanded by Robert F Notari Marcel Dekker Inc, New York and Basel, 1987.
- k. Encyclopedia of Pharmaceutical Technology, Vol 13, James Swarbrick, James, C. Roylan, Marcel Dekker Inc, New York 1996.



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ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.



DEPARTMENT OF

Biopharmaceutics and pharmacokinetics



Name *P. Shiny* PIN No.

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*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. *P. Shiny*

a student of *IV Pharm-D* with Regd. No. *203.G.1.TU.012*

in the *B.P.P.K. - Lab* Laboratory during the year *2023-2024*

No. of Experiments Conducted

17

No. of Experiments Attended

16

G. Sankar, 21/2/24
Signature - Faculty incharge

[Signature]
Signature - Head of the Department

Aditya Pharmacy College

SURAMPALEM-533 437

Submitted for the Practical examination held on *11-05-2024*

E. Usharani
EXAMINER-1

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SURAMPALEM-533 437

[Signature]
EXAMINER-2



POINTER

S.No.	Date	Name of the Experiment	Page No.	Remarks
	6/6/23	Introduction	1-3	B
1.	13/6/23	Evaluation of dissolution rate of commercial brands of paracetamol tablets as per IP/BP/USP.	4-80	6/23
				11/7/23
2.	20/6/23	Effect of Binder on dissolution of paracetamol.	9-12	25/7/23
3.	11/7/23	Effect of Diluent on dissolution rate of paracetamol tablets.	13-17	
4.	25/7/23	Effect of Super disintegrants on dissolution rate of paracetamol.	18-21	1/8/23
5.	1/8/23	Evaluation of hypothetical dissolution of 2 brands of PCM	22-24	8/8/23
6.	8/8/23	Evaluation of different brands of the sustain released diclofenac sodium tablets.	25-29	19/9/23
7.	19/9/23	Effect of solubility enhancer on dissolution rate of paracetamol	30-33	26/9/23
8.	26/9/23	Study of protein Binding of alimesulide using a semi-permeable membrane.	34-37	31/10/23
	31/10/23	Introduction to pharmacokinetics	38-39	7/10/23
9.	17/10/23	Estimation of different pharmacokinetic parameters from given one compartment model IV Bolus data	40-48	24/10/23
10.	24/10/23	Estimation of pharmacokinetic parameters.	44	31/10/23

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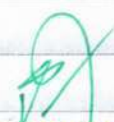
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POINTER

S.No.	Date	Name of the Experiment	Page No.	Remarks
11.	31/10/23	Determination of Mean Residence Time	45-46	7/11/23
12.	7/11/23	Analysis of pharmacokinetic data after extravascular administration [one-compartment model].	47-51	9/11/24
13.	28/11/23	Determination of Absorption Rate constant by Wagner Nelson method.	52-54	23/1/24
14.	9/01/24	Determination of Elimination rate constant by Rate excretion method.	55-57	30/1/24
15.	23/1/24	Estimation of pharmacokinetic parameters of one compartment model using data by sigma-minus method	58-64	30/1/24
16.	30/1/24	Determination of Renal clearance of Riboflavin by using urinary excretion data.	65-68	6/2/24
17.	6/2/24	Determination of Renal clearance of Ascorbic acid by using Sigma Minus method.	69-71	24/2/24


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Approved by AICTE & PCI – NEW DELHI, Affiliated to JNU KAKINADA
(Formerly known as Aditya Institute of Pharmaceutical Sciences & Research)

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PHARM D STUDENTS PROJECT LIST (2023-2024)

BATCH NO	REG. NUMBER	NAME OF THE STUDENT	TITLE OF THE PROJECT	HOSPITAL GUIDE	INSTITUTIONAL GUIDE
1	193G1T0009	ESHITA LAL	FOE OR ALLY : UNRAVELING THE ROLE OF NSAIDS IN THE FRACTURE HEALING	Dr. P. SURYA PRAKASH NAIDU MBBS, MS (ORTHO)FUR,FOAI	Dr. M. KARTHIK MOHAN PHARM D
	193G1T0015	NIRMALYA ROY	FOE OR ALLY : UNRAVELING THE ROLE OF NSAIDS IN THE FRACTURE HEALING	Dr. P. SURYA PRAKASH NAIDU MBBS, MS (ORTHO)FUR,FOAI	Dr. M. KARTHIK MOHAN PHARM D
	193G1T0025	KALIGITHI SUNANDA	FOE OR ALLY : UNRAVELING THE ROLE OF NSAIDS IN THE FRACTURE HEALING	Dr. P. SURYA PRAKASH NAIDU MBBS, MS (ORTHO)FUR,FOAI	Dr. M. KARTHIK MOHAN PHARM D

	193G1T0029	KONIDENA VENKATA SAI CHARAN	FOE OR ALLY : UNRAVELING THE ROLE OF NSAIDS IN THE FRACTURE HEALING	Dr. P. SURYA PRAKASH NAIDU MBBS, MS (ORTHO)FUR,FOAI	
2	193G1T0003	BATHULA AMULYA	A PROSPECTIVE OBSERVATIONAL STUDY ON UNVEILING THE CONVENTIONAL AND UNCONVENTIONAL RISK FACTORS IN MYOCARDIAL INFARCTION PATIENTS AT A TERTIARY CARE	Dr. B. D. PAVAN KUMAR MBBS ,MD, DM, AFESC	Dr. J. BHARGAVA NARENDRA PHARM D
	193G1T0007	DHANDUPROLU SATISH	A PROSPECTIVE OBSERVATIONAL STUDY ON UNVEILING THE CONVENTIONAL AND UNCONVENTIONAL RISK FACTORS IN MYOCARDIAL INFARCTION PATIENTS AT A TERTIARY CARE	Dr. B. D. PAVAN KUMAR MBBS ,MD, DM, AFESC	Dr. J. BHARGAVA NARENDRA PHARM D
	193G1T0013	LALM MOUNIKA	A PROSPECTIVE OBSERVATIONAL STUDY ON UNVEILING THE CONVENTIONAL AND UNCONVENTIONAL RISK FACTORS IN MYOCARDIAL INFARCTION PATIENTS AT A TERTIARY CARE	Dr. B. D. PAVAN KUMAR MBBS ,MD, DM, AFESC	Dr. J. BHARGAVA NARENDRA PHARM D
	193G1T0027	KALLEPALLI DEEVENA DAS	A PROSPECTIVE OBSERVATIONAL STUDY	Dr. B. D. PAVAN KUMAR MBBS ,MD, DM, AFESC	Dr. J. BHARGAVA NARENDRA PHARM D

			ON UNVEILING THE CONVENTIONAL AND UNCONVENTIONAL RISK FACTORS IN MYOCARDIAL INFARCTION PATIENTS AT A TERTIARY CARE		
3	193G1T0005	CHIKKALA BHAGYA ARUNA	BEYOND THE PRESCRIPTIONS: ENHANCING QUALITY OF LIFE AND MEDICATION ADHERENCE THROUGH PATIENT COUNSELLING IN PATIENTS WITH CARDIOVASCULAR DISEASE	Dr. M. S. CHANDRAMOULI MBBA, MD, DM; (EP SPECIALIST)	Dr. P. S. S. SAIKIRAN PHARMACOLOGY
	193G1T0014	MANISHA LAHKAR	BEYOND THE PRESCRIPTIONS: ENHANCING QUALITY OF LIFE AND MEDICATION ADHERENCE THROUGH PATIENT COUNSELLING IN PATIENTS WITH CARDIOVASCULAR DISEASE	Dr. M. S. CHANDRAMOULI MBBA, MD, DM; (EP SPECIALIST)	Dr. P. S. S. SAIKIRAN PHARMACOLOGY
	193G1T0019	SONGA PREMCHAND	BEYOND THE PRESCRIPTIONS: ENHANCING QUALITY OF LIFE AND MEDICATION ADHERENCE THROUGH PATIENT COUNSELLING IN PATIENTS WITH CARDIOVASCULAR DISEASE	Dr. M. S. CHANDRAMOULI MBBA, MD, DM; (EP SPECIALIST)	Dr. P. S. S. SAIKIRAN PHARMACOLOGY

			DISEASE		
	193G1T0025	YOGANANDAM SUHARIKA	BEYOND THE PRESCRIPTIONS: ENHANCING QUALITY OF LIFE AND MEDICATION ADHERENCE THROUGH PATIENT COUNSELLING IN PATIENTS WITH CARDIOVASCULAR DISEASE	Dr. M. S. CHANDRAMOULI MBBA, MD, DM; (EP SPECIALIST)	Dr. P. S. S. SAIKIRAN PHARMACOLOGY
4	193G1T0008	DUDA SHAKINA	ENHANCING RESILIENCE : UNDERSTANDING AND MITIGATING THE PHYSICAL AND MENTAL CHALLENGES OF HEMODIALYSIS IN PATIENTS WITH END- STAGE RENAL DISEASE	Dr. D. V. S. SOMAYAJULU MBBS , MD, DM	Dr.D. SATHIS KUMAR M.PHARM Ph.D
	193G1T0010	GIDLA HEPZIBAH RANI	ENHANCING RESILIENCE : UNDERSTANDING AND MITIGATING THE PHYSICAL AND MENTAL CHALLENGES OF HEMODIALYSIS IN PATIENTS WITH END- STAGE RENAL DISEASE	Dr. D. V. S. SOMAYAJULU MBBS , MD, DM	Dr.D. SATHIS KUMAR M.PHARM Ph.D
	193G1T0017	RISHAV	ENHANCING RESILIENCE : UNDERSTANDING AND MITIGATING THE PHYSICAL AND MENTAL CHALLENGES OF HEMODIALYSIS IN	Dr. D. V. S. SOMAYAJULU MBBS , MD, DM	Dr.D. SATHIS KUMAR M.PHARM Ph.D

			PATIENTS WITH END-STAGE RENAL DISEASE		
	193G1T0030	ULSI L. S. V. NARAYANA	ENHANCING RESILIENCE : UNDERSTANDING AND MITIGATING THE PHYSICAL AND MENTAL CHALLENGES OF HEMODIALYSIS IN PATIENTS WITH END-STAGE RENAL DISEASE	Dr. D. V. S. SOMAYAJULU MBBS, MD, DM	Dr.D. SATHIS KUMAR M.PHARM Ph.D
5	193G1T0002	ALLAVARAPU MANOGNA	ASSESSMENT OF PREVALANCE OF FIBROSIS IN NON-ALCOHOLIC FATTY LIVER DISEASE PATIENTS USING FIBROSCAN : INTEGRATING PATIENT EDUCATION FOR EFFECTIVE DISEASE MANAGEMENT IN A TERTIARY CARE HOSPITAL	Dr. R. SRINIVAS MURTY MBBS, MD, DM	Ms. P. RATNA KUMARI M.PHARM
	193G1T0004	BOKKA PRADEEPTHI	Dr. R. SRINIVAS MURTY MBBS, MD, DM	Dr. R. SRINIVAS MURTY MBBS, MD, DM	Ms. P. RATNA KUMARI M. PHARM
	193G1T0012	JAKKULA SUPRIYA	ASSESSMENT OF PREVALANCE OF FIBROSIS IN NON-ALCOHOLIC FATTY LIVER DISEASE PATIENTS USING FIBROSCAN : INTEGRATING PATIENT EDUCATION FOR EFFECTIVE DISEASE	Dr. R. SRINIVAS MURTY MBBS, MD, DM	Ms. P. RATNA KUMARI M. PHARM

			MANAGEMENT IN A TERTIARY CARE HOSPITAL		
	193G1T0016	NISAR AHMED	ASSESSMENT OF PREVALANCE OF FIBROSIS IN NON- ALCOHOLIC FATTY LIVER DISEASE PATIENTS USING FIBROSCAN : INTEGRATING PATIENT EDUCATION FOR EFFECTIVE DISEASE MANAGEMENT IN A TERTIARY CARE HOSPITAL	Dr. R. SRINIVAS MURTY MBBS, MD, DM	Ms . P. RATNA KUMARI M. PHARM
6	193G1T0011	GUDIVADA SANKERTHANA	ASSESSING THE EFFECTIVENESS OF NUTRITIONAL COUNSELLING ON QUALITY OF LIFE IN HAEMODIALYSIS PATIENTS : AN OBSERVATIONAL STUDY	Dr. SANA PRAVEEN MRCP (UK), CCT (NEPHROLOGY)	Dr. PAVAN KUMAR YANAMADALA PHARM D
	193G1T0018	SANKHANIL PANDA	ASSESSING THE EFFECTIVENESS OF NUTRITIONAL COUNSELLING ON QUALITY OF LIFE IN HAEMODIALYSIS PATIENTS : AN OBSERVATIONAL STUDY	Dr. SANA PRAVEEN MRCP (UK), CCT (NEPHROLOGY)	Dr. PAVAN KUMAR YANAMADALA PHARM D
	193G1T0022	VANARASI SRI SATYA MANOJNA NAIDU	ASSESSING THE EFFECTIVENESS OF	Dr. SANA PRAVEEN MRCP (UK), CCT	Dr. PAVAN KUMAR YANAMADALA PHARM D

			NUTRITIONAL COUNSELLING ON QUALITY OF LIFE IN HAEMODIALYSIS PATIENTS : AN OBSERVATIONAL STUDY	(NEPHROLOGY)	
	193G1T0024	YATI RAI	ASSESSING THE EFFECTIVENESS OF NUTRITIONAL COUNSELLING ON QUALITY OF LIFE IN HAEMODIALYSIS PATIENTS : AN OBSERVATIONAL STUDY	Dr. SANA PRAVEEN MRCP (UK), CCT (NEPHROLOGY)	Dr. PAVAN KUMAR YANAMADALA PHARM D
7	193G1T0001	AKASAPU MADHURI	DIABETES IN FOCUS : INVESTIGATING THE PREVALENCE AND ASSESSING RISK FACTORS FOR THE DEVELOPMENT OF MICRO AND MACROVASCULAR COMPLICATIONS IN PATIENTS WITH DIABETES MELLITUS	Dr. M. PHANI RAMANA BHUSHAN MBBS, MD	Dr. P. S. V. M. DEEPIKA PHARM D
	193G1T0006	CHILAKALA SWARNAKISHORE	DIABETES IN FOCUS : INVESTIGATING THE PREVALENCE AND ASSESSING RISK FACTORS FOR THE DEVELOPMENT OF MICRO AND MACROVASCULAR	Dr. M. PHANI RAMANA BHUSHAN MBBS, MD	Dr. P. S. V. M. DEEPIKA PHARM D

			COMPLICATIONS IN PATIENTS WITH DIABETES MELLITUS		
	193G1T0021	THOTA THANMAVI SAI LAKSHMI	DIABETES IN FOCUS : INVESTIGATING THE PREVALENCE AND ASSESSING RISK FACTORS FOR THE DEVELOPMENT OF MICRO AND MACROVASCULAR COMPLICATIONS IN PATIENTS WITH DIABETES MELLITUS	Dr. M. PHANI RAMANA BHUSHAN MBBS, MD	Dr. P. S. V. M. DEEPIKA PHARM D
	193G1T0023	VENMANA HEMA RATNA SAI LAKSHMI	DIABETES IN FOCUS : INVESTIGATING THE PREVALENCE AND ASSESSING RISK FACTORS FOR THE DEVELOPMENT OF MICRO AND MACROVASCULAR COMPLICATIONS IN PATIENTS WITH DIABETES MELLITUS	Dr. M. PHANI RAMANA BHUSHAN MBBS, MD	Dr. P. S. V. M. DEEPIKA PHARM D

Second year

2.1 PATHOPHYSIOLOGY (THEORY)

Theory : 3 Hrs. /Week

1. **Scope of the Subject:** This course is designed to impart a thorough knowledge of the relevant aspects of pathology of various conditions with reference to its pharmacological applications, and understanding of basic Pathophysiological mechanisms. Hence it will not only help to study the syllabus of pathology, but also to get baseline knowledge of its application in other subject of pharmacy.
2. **Objectives of the Subject :** Upon completion of the subject student shall be able to –
 - a. describe the etiology and pathogenesis of the selected disease states;
 - b. name the signs and symptoms of the diseases; and
 - c. mention the complications of the diseases.

Text books (Theory)

- a. Pathologic basis of disease by- Cotran, Kumar, Robbins
- b. Text book of Pathology- Harsh Mohan
- c. Text book of Pathology- Y.M. Bhide

Reference books (Theory)

- a. Clinical Pharmacy and Therapeutics; Second edition; Roger Walker; Churchill Livingstone publication

3. Detailed syllabus and lecture wise schedule :

Chapter

- 1 **Basic principles of cell injury and Adaptation**
 - a) Causes, Pathogenesis and morphology of cell injury
 - b) Abnormalities in lipoproteinaemia, glycogen infiltration and glycogen infiltration and glycogen infiltration and glycogen storage diseases
- 2 **Inflammation**
 - a) Pathogenesis of acute inflammation, Chemical mediators in inflammation, Types of chronic inflammation
 - b) Repairs of wounds in the skin, factors influencing healing of wounds
- 3 **Diseases of Immunity**
 - a) Introduction to T and B cells
 - b) MHC proteins or transplantation antigens
 - c) Immune tolerance
 - Hypersensitivity
Hypersensitivity type I, II, III, IV, Biological significance, Allergy due to food, chemicals and drugs
 - Autoimmunity
Criteria for autoimmunity, Classifications of autoimmune diseases in man, mechanism of autoimmunity, Transplantation and immunologic tolerance, allograft rejections, transplantation antigens, mechanism of rejection of allograft.
 - Acquired immune deficiency syndrome (AIDS)



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SURAMPALEM-533 437

FOE OR ALLY: UNRAVELING THE ROLE OF NSAIDS IN
THE FRACTURE HEALING

The thesis work submitted to



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-
KAKINADA

In partial fulfilment for the award of the Degree of
DOCTOR OF PHARMACY

Submitted by

ESHITA LAL	(193G1T0009)
NIRMALYA ROY	(193G1T0015)
KALIGITHI SUNANDA	(193G1T0026)
KONIDENA VENKATA SAI CHARAN	(193G1T0029)

Under the esteemed guidance of

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DECLARATION

We hereby declare that the thesis entitled "FOE OR ALLY: UNRAVELING THE ROLE OF NSAIDS IN THE FRACTURE HEALING" is a bonafide project work carried out by us under the guidance of Dr. M. Karthik Mohan, Assistant Professor, Aditya Pharmacy College (A) and Dr. P. Surya Prakash Naidu, Consultant Orthopedic and Joint Replacement Surgeon at Trust Multispeciality Hospitals, Kakinada, in partial fulfillment of the requirements for the Award of the Degree of Doctor of Pharmacy in the Department of Pharmacy Practice to Jawaharlal Nehru Technological University-Kakinada (JNTU-K). The work embodied in this thesis is original and has not been submitted in part or in full for any degree of this or any other university.

Place: Surampalem

Date: 01-05-2024

Eshita Lal

Eshita Lal.

Nirmalya Roy

Nirmalya Roy.

Kaligithi Sunanda

K. Sunanda

Konidena Venkata Sai Charan

K.V. Saicharan.



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Time:



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The results incorporated in this work have not been submitted to any other university or institute for the award of any degree.

Place: Surampalem

Date:

4/5/24



Dr. D. Sathis Kumar,

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Principal,

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EVALUATION CERTIFICATE

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Place: Surampalem

Date: 10-05-2024

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Sign:

External Examiner

Sign:



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The study provides a comprehensive understanding of the fracture healing process across various bones, shedding the light on the intricate stages involved in the bone restoration, it was elucidated that fracture healing follows a sequential pattern, starting from hematoma formation and culminating in bone remodeling.

In conclusion, this study has provided valuable insights into the complex interplay between NSAID use, fracture healing, and pain assessment scores based on radiological examinations across various types of fractures in different body parts. We observed the trends indicating that frequent usage of NSAIDs may be associated with slower healing rates and pain scores variations particularly in certain types of fractures or when administered at higher doses.

Furthermore, our study highlights the importance of ongoing monitoring and assessment throughout the healing process with regular radiological evaluation and pain assessments. Substances ranging from vitamins and minerals to medications and supplements, underscore the complexity of the bone healing process and the diverse array of factors that influence it. Each of these substances plays a distinct role in bone metabolism, tissue repair, and overall bone health.



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4.2 HOSPITAL PHARMACY (THEORY)

Theory : 2 Hrs. /Week

1. **Scope:** In the changing scenario of pharmacy practice in India, for successful practice of Hospital Pharmacy, the students are required to learn various skills like drug distribution, drug dispensing, manufacturing of parenteral preparations, drug information, patient counselling, and therapeutic drug monitoring for improved patient care.
2. **Objectives:** Upon completion of the course, the student shall be able to –
 - a. know various drug distribution methods;
 - b. know the professional practice management skills in hospital pharmacies;
 - c. provide unbiased drug information to the doctors;
 - d. know the manufacturing practices of various formulations in hospital set up;
 - e. appreciate the practice based research methods; and
 - f. appreciate the stores management and inventory control.

Text books: (latest editions)

- a. Hospital pharmacy by William .E. Hassan
- b. A text book of Hospital Pharmacy by S.H.Merchant & Dr. J.S. Qadry. Revised by R.K.Goyal & R.K. Parikh

References:

- a. WHO consultative group report.
- b. R.P.S. Vol.2. Part –B; Pharmacy Practice section.
- c. Handbook of pharmacy – health care. Edt. Robin J Harman. The Pharmaceutical press.

3. Lecture wise programme :

Topics

- 1 **Hospital - its Organisation and functions**
- 2 **Hospital pharmacy-Organisation and management**
 - a) Organizational structure-Staff, Infrastructure & work load statistics
 - b) Management of materials and finance
 - c) Roles & responsibilities of hospital pharmacist
- 3 **The Budget – Preparation and implementation**
- 4 **Hospital drug policy**
 - a) Pharmacy and Therapeutic committee (PTC)
 - b) Hospital formulary
 - c) Hospital committees
 - Infection committee
 - Research and ethical committee
 - d) developing therapeutic guidelines
 - e) Hospital pharmacy communication - Newsletter



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**A PROSPECTIVE OBSERVATIONAL STUDY ON
UNVEILING THE CONVENTIONAL AND
UNCONVENTIONAL RISK FACTORS IN MYOCARDIAL
INFARCTION PATIENTS AT A TERTIARY CARE
HOSPITAL.**

The thesis work submitted to



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-
KAKINADA**

*In partial fulfillment for the award of the Degree of
DOCTOR OF PHARMACY*

Submitted by

BATHULA AMULYA	(193G1T0003)
DHANDUPROLU SATISH	(193G1T0007)
LALAM MOUNIKA	(193G1T0013)
KALLEPALLI DEEVENA DAS	(193G1T0027)

Under the esteemed guidance of

HOSPITAL GUIDE	INSTITUTIONAL GUIDE
Dr. B. D. PAVAN KUMAR	Dr. J. BHARGAVA NARENDRA
MBBS, MD, DM, AFESC	PharmD
Interventional cardiologist	Assistant Professor
Trust Multispeciality Hospitals, Kakinada	Aditya Pharmacy College (A)



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DECLARATION

We hereby declare that the thesis entitled *A PROSPECTIVE OBSERVATIONAL STUDY ON UNVEILING THE CONVENTIONAL AND UNCONVENTIONAL RISK FACTORS IN MYOCARDIAL INFARCTION PATIENTS AT A TERTIARY CARE HOSPITAL* is a bonafide project work carried out by us under the guidance of *Dr. J. BHARGAVA NARENDRA, Assistant professor, Aditya Pharmacy College (A)* and *Dr. B. D. PAVAN KUMAR, Interventional cardiologist and physician at Trust Multispecialty Hospitals, Kakinada*, in partial fulfillment of the requirements for the Award of the Degree of Doctor of Pharmacy in the Department of Pharmacy Practice to Jawaharlal Nehru Technological University-Kakinada (JNTU-K). The work embodied in this thesis is original and has not been submitted in part or in full for any degree of this or any other university.

Place: Surampalem

Date: 06-05-2024

Bathula Amulya

Dhanduprolu Satish

Lalam Mounika

Kallepalli Devena Das

B. Amulya

D. Satish

L. Mounika

K. Devena-Das



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CERTIFICATE BY THE GUIDES

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Place: Surampalem & Kakinada

Date: 06-05-2024

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Dr. DURGA PAVAN KUMAR
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The results incorporated in this work have not been submitted to any other university or institute for the award of any degree.

Dr. D. Sathis Kumar,

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Place: Surampalem

Date: 6/5/24



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Place: Surampalem

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External Examiner

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CONCLUSION:

This study highlights several significant findings regarding the conventional and unconventional risk factors. In this context, it describes the relationship between various risk factors of myocardial infarction. So, our study shows that the male category is more prone to myocardial infarction than the female category.

Hypertension is the highest risk in males than females in conventional risk factors. In unconventional risk factors, a family history of CVD is more prone to risk causing myocardial infarction. In this context, we studied and found the relationship between each unconventional risk factor and with conventional risk factor.

In this comparison, 93(66%) patients with hypertension have sleep disturbance with less than 6 hours, and 38(27%) patients observed with hyperlipidemia who have been consuming alcohol for above 10 years.

In this observation, 82(58%) patients with hyperlipidemia observed a family history of CVD.

Furthermore, Dental Caries are observed in populations with hypertension, diabetes mellitus, and hyperlipidemia.



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A handwritten signature in green ink, appearing to be "PSH".

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APPENDIX-A

(See regulation 8)

PHARM.D. SYLLABUS

First Year

1.1 HUMAN ANATOMY & PHYSIOLOGY (THEORY)

Theory : 3 Hrs. /Week

1. **Scope and Objectives:** This course is designed to impart a fundamental knowledge on the structure and functions of the human body. It also helps in understanding both homeostasis mechanisms and homeostatic imbalances of various body systems. Since a medicament, which is produced by pharmacist, is used to correct the deviations in human body, it enhances the understanding of how the drugs act on the various body systems in correcting the disease state of the organs.
2. **Upon completion of the course the student shall be able to:**
 - a. describe the structure (gross and histology) and functions of various organs of the human body;
 - b. describe the various homeostatic mechanisms and their imbalances of various systems;
 - c. identify the various tissues and organs of the different systems of the human body;
 - d. perform the hematological tests and also record blood pressure, heart rate, pulse and Respiratory volumes;
 - e. appreciate coordinated working pattern of different organs of each system; and
 - f. appreciate the interlinked mechanisms in the maintenance of normal functioning (homeostasis) of human body
3. **Course materials:**

Text books

- a. Tortora Gerard J. and Nicholas, P. Principles of anatomy and physiology Publisher Harpercollins college New York.
- b. Wilson, K.J.W. Ross and Wilson's foundations of anatomy and physiology. Publisher: Churchill Livingstone, Edinburg.

Reference books

- a. Guyton arthur, C. *Physiology of human body*. Publisher: Holtsaunders.
- b. Chatterjee, C.C. *Human physiology*. Volume 1&11. Publisher: medical allied agency, Calcutta.
- c. Peter L. Williams, Roger Warwick, Mary Dyson and Lawrence, H.
- d. *Gray's anatomy*. Publisher: Churchill Livingstone, London.



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4. Lecture wise program :

Topics

- 1 Scope of anatomy and physiology, basic terminologies used in this subject
(Description of the body as such planes and terminologies)
- 2 Structure of cell – its components and their functions.
- 3 Elementary tissues of the human body: epithelial, connective, Muscular and nervous tissues-their sub-types and characteristics
- 4 a) Osseous system - structure, composition and functions of the Skeleton. (done in practical classes - 6hrs)
b) Classification of joints, Types of movements of joints and disorders of joints
(Definitions only)
- 5 Haemopoetic System
a) Composition and functions of blood
b) Haemopoiesis and disorders of blood components (definition of disorder)
c) Blood groups
d) Clotting factors and mechanism
e) Platelets and disorders of coagulation
- 6 Lymph
a) Lymph and lymphatic system, composition, formation and circulation.
b) Spleen: structure and functions, Disorders
c) Disorders of lymphatic system (definition only)
- 7 Cardiovascular system
a) Anatomy and functions of heart
b) Blood vessels and circulation (Pulmonary, coronary and systemic circulation)
c) Electrocardiogram (ECG)
d) Cardiac cycle and heart sounds
e) Blood pressure – its maintenance and regulation
f) Definition of the following disorders
Hypertension, Hypotension, Arteriosclerosis, Atherosclerosis, Angina, Myocardial infarction, Congestive heart failure, Cardiac arrhythmias
- 8 Respiratory system
a) Anatomy of respiratory organs and functions
b) Mechanism / physiology of respiration and regulation of respiration
c) Transport of respiratory gases
d) Respiratory volumes and capacities, and Definition of: Hypoxia, Asphyxia, Dybarism, Oxygen therapy and resuscitation.
- 9 Digestive system
a) Anatomy and physiology of GIT
b) Anatomy and functions of accessory glands of GIT
c) Digestion and absorption
d) Disorders of GIT (definitions only)



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**BEYOND THE PRESCRIPTIONS: ENHANCING
QUALITY OF LIFE AND MEDICATION ADHERENCE
THROUGH PATIENT COUNSELLING IN PATIENTS
WITH CARDIOVASCULAR DISEASE**

The thesis work submitted to



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-
KAKINADA**

*In partial fulfillment of the requirements for the Degree of
DOCTOR OF PHARMACY*

Submitted by

CHIKKALA BHAGYA ARUNA	(193G1T0005)
MANISHA LAHKAR	(193G1T0014)
SONGA PREMCHAND	(193G1T0019)
YOGANANDAM SUHARIKA	(193G1T0025)

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Aditya Nagar, ADB Road, Surampalem-533437, Andhra Pradesh, India

DECLARATION

We hereby declare that the thesis entitled "*BEYOND THE PRESCRIPTIONS: ENHANCING QUALITY OF LIFE AND MEDICATION ADHERENCE THROUGH PATIENT COUNSELLING IN PATIENTS WITH CARDIOVASCULAR DISEASE*" is a bonafide project work carried out by us, under the guidance of *Dr. P. S. S. Sai Kiran, Associate Professor, Aditya Pharmacy College (A)* and *Dr. M. S. Chandra Mouli, EP Specialist, Consultant Cardiologist and Electrophysiologist at Trust Multispecialty Hospitals, Kakinada*, in partial fulfillment of the requirements for the degree of Doctor of Pharmacy in the Department of Pharmacy Practice to Jawaharlal Nehru Technological University-Kakinada (JNTU-K). The work embodied in this thesis is original and has not been submitted in part or in full for any degree of this or any other university.

Place: Surampalem

Date:

Chikkala Bhagya Aruna

Manisha Lahkar

Songa PremChand

Yoganandam Suharika

Ch. Bhagya Aruna
Manisha Lahkar
S. Premchand
Y. Suharika



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Place: Surampalem & Kakinada

Date: 03-05-24

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Approved by AICTE, PCI, UGC & ISO
Aditya Nagar, ADB Road, Surampalem-533437, Andhra Pradesh, India

CERTIFICATE BY THE PRINCIPAL

This is to certify that the thesis work entitled, "BEYOND THE PRESCRIPTIONS: ENHANCING QUALITY OF LIFE AND MEDICATION ADHERENCE THROUGH PATIENT COUNSELLING IN PATIENTS WITH CARDIOVASCULAR DISEASE" is being submitted by **CHIKKALA BHAGYA ARUNA** (Reg. No. 193G1T0005), **MANISHA LAHKAR** (Reg. No. 193G1T0014), **SONGA PREMCHAND** (Reg. No. 193G1T0019) & **YOGANANDAM SUHARIKA** (Reg. No. 193G1T0025), to Jawaharlal Nehru Technological University, Kakinada (JNTUK), in partial fulfillment of the requirements of the degree of **DOCTOR OF PHARMACY** in the **Department of Pharmacy Practice** under the esteemed guidance of **Dr. D. Sathis Kumar**, Professor & Principal, is the bonafide project work carried out by them at the Department of Pharmacy Practice, Aditya Pharmacy College (A), Surampalem & Trust Multispeciality Hospitals, Kakianda.

The results incorporated in this work have not been submitted to any other university or institute for the award of any degree.

Dr. D. Sathis Kumar,
M. Pharm, Ph. D.
Professor & Principal,
Aditya Pharmacy College (A),
Surampalem- 533437

Place: Surampalem
Date: 3/5/24



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EVALUATION CERTIFICATE

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Place: Surampalem

Date: 21/11/20

Internal Examiner

External Examiner

Sign:

Sign:



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CONCLUSION

Cardiovascular diseases are the primary cause of death worldwide. They represent one of the most prevalent chronic illnesses and a significant contributor to disability. The overall health of cardiovascular patients is greatly influenced by their quality of life. Research indicates that cardiovascular disorders have a significant negative impact on the quality of life for both men and women. However, the best approach to managing the disease is by maintaining a healthy lifestyle and following a proper diet. This is achieved through patient counseling, which has been shown to have minimal negative effects. The study was conducted over a six-month period at a single-centered hospital. Data were collected from 110 patients and counseling was provided in collaboration with our clinical guide and dietician. Patients were counseled about medication adherence and the importance of their well-being according to their health condition, resulting in a slight improvement in their quality of life. While the study duration was short, there was a noticeable but not complete improvement in quality of life.



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5.3 CLINICAL PHARMACOKINETICS AND PHARMACOTHERAPEUTIC DRUG MONITORING (THEORY)

Theory : 2 Hrs. /Week

1. **Introduction to Clinical pharmacokinetics.**
2. **Design of dosage regimens:**
Nomograms and Tabulations in designing dosage regimen, Conversion from intravenous to oral dosing, Determination of dose and dosing intervals, Drug dosing in the elderly and pediatrics and obese patients.
3. **Pharmacokinetics of Drug Interaction:**
 - a. Pharmacokinetic drug interactions
 - b. Inhibition and Induction of Drug metabolism
 - c. Inhibition of Biliary Excretion.
4. **Therapeutic Drug monitoring:**
 - a. Introduction
 - b. Individualization of drug dosage regimen (Variability – Genetic, Age and Weight, disease, Interacting drugs).
 - c. Indications for TDM. Protocol for TDM.
 - d. Pharmacokinetic/Pharmacodynamic Correlation in drug therapy.
 - e. TDM of drugs used in the following disease conditions: cardiovascular disease, Seizure disorders, Psychiatric conditions, and Organ transplantations.
5. **Dosage adjustment in Renal and hepatic Disease.**
 - a. Renal impairment
 - b. Pharmacokinetic considerations
 - c. General approach for dosage adjustment in Renal disease.
 - d. Measurement of Glomerular Filtration rate and creatinine clearance.
 - e. Dosage adjustment for uremic patients.
 - f. Extracorporeal removal of drugs.
 - g. Effect of Hepatic disease on pharmacokinetics.
6. **Population Pharmacokinetics.**
 - a. Introduction to Bayesian Theory.
 - b. Adaptive method or Dosing with feed back.
 - c. Analysis of Population pharmacokinetic Data.
7. **Pharmacogenetics**
 - a. Genetic polymorphism in Drug metabolism: Cytochrome P-450 Isoenzymes.
 - b. Genetic Polymorphism in Drug Transport and Drug Targets.
 - c. Pharmacogenetics and Pharmacokinetics/Pharmacodynamic considerations



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ENHANCING RESILIENCE: UNDERSTANDING AND
MITIGATING THE PHYSICAL AND MENTAL
CHALLENGES OF HEMODIALYSIS IN PATIENTS WITH
END-STAGE RENAL DISEASE

The thesis work submitted to



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-
KAKINADA

In partial fulfillment of the requirements for the award of the Degree of
DOCTOR OF PHARMACY

Submitted by

Ms. Duda Shakina	(193G1T0008)
Ms. Gidla Hepzibah Rani	(193G1T0010)
Mr. Rishav	(193G1T0017)
Mr. Ulisi L. S. V. Narayana	(193G1T0030)

Under the esteemed guidance of

HOSPITAL GUIDE

Dr. D. V. S. Somayajulu

MBBS, MD, DM

Sr. Consultant Nephrologist

Trust Multispeciality Hospitals, Kakinada

INSTITUTIONAL GUIDE

Dr. D. Sathis Kumar

M. Pharm, Ph. D.

Professor & Principal

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MAY 2024



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Aditya Nagar, ADB Road, Surampalem-533437, Andhra Pradesh, India

DECLARATION

We hereby declare that the thesis entitled "ENHANCING RESILIENCE: UNDERSTANDING AND MITIGATING THE PHYSICAL AND MENTAL CHALLENGES OF HEMODIALYSIS IN PATIENTS WITH END-STAGE RENAL DISEASE" is a bonafide project work carried out by us, under the guidance of **Dr. D. Sathis Kumar, Professor & Principal, Aditya Pharmacy College (A)** and **Dr. D. V. S. Somayajulu, Senior Consultant Nephrologist & Renal Transplant Physician at Trust Multispeciality Hospitals, Kakinada**, in partial fulfillment of the requirements for the award of the degree of Doctor of Pharmacy in the Department of Pharmacy Practice to Jawaharlal Nehru Technological University-Kakinada (JNTU-K). The work embodied in this thesis is original and has not been submitted in part or in full for any degree of this or any other university.

Place: Surampalem

Date: 6/5/2024

Duda Shakina

D. Shakina

Gidla Hepzibah Rani

G. Hepzibah Rani

Rishav

Rishav

Ulisi Lakshmi Sri Venkata Narayana

U.L.S.V. Narayana



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CERTIFICATE BY THE GUIDES

This is to certify that the thesis work entitled "ENHANCING RESILIENCE: UNDERSTANDING AND MITIGATING THE PHYSICAL AND MENTAL CHALLENGES OF HEMODIALYSIS IN PATIENTS WITH END-STAGE RENAL DISEASE" is a bonafide Project work carried out by Ms. Duda Shakina (Reg. No. 193G1T0008), Ms. Gidla Hepzibah Rani (Reg. No. 193G1T0010), Mr. Rishav (Reg. No. 193G1T0017) & Mr. Ulisi Lakshmi Sri Venkata Narayana (Reg. No. 193G1T0030), under the guidance of us at the Department of Pharmacy Practice, Aditya Pharmacy College (A), and the Department of Nephrology, Trust Multispeciality Hospitals, Kakinada. In our opinion, this work has reached the standards in partial fulfillment of the requirements for the award of the degree of Doctor of Pharmacy as per the regulations of the University.

Place: Surampalem & Kakinada

Date:

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CERTIFICATE BY THE PRINCIPAL

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Dr. D. Sathis Kumar,
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Date: 01/05/24





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Place: Surampalem

Date: 01/5/24

Internal Examiner

External Examiner

Sign:

Sign:



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CONCLUSION

End-stage renal disease (ESRD) significantly diminishes the quality of life (QOL) for patients undergoing Hemodialysis, as evidenced by the Pre-Score values obtained before the given intervention. This decline manifests in both physical limitations such as fatigue, and pain, and mental health challenges such as depression, and anxiety, as reported by patients themselves. However, by incorporating supportive interventions into treatment plans, healthcare providers have the potential to significantly improve patient well-being.

Social support groups can foster social connections and reduce isolation, while psychosocial counseling can address mental health issues. Intradialytic exercises can improve physical limitations and fatigue. Providing education to the Patients with ESRD undergoing Hemodialysis on what is the condition they are suffering from, what is about Hemodialysis, debunking the myths, and providing much more insights into the problems and the strategies to overcome them might help them enhance their overall well-being. These interventions, grounded in theories like Social Support Theory, can not only enhance patient resilience and QOL but also lead to improved clinical outcomes such as treatment adherence and potentially reduce healthcare costs in the long run.

Overall, this study provided preliminary evidence that a combination of Intradialytic exercise, support groups, and patient education counseling may improve the quality of life of ESRD patients undergoing hemodialysis. However, the single-arm design and short follow-up period limit the generalizability and strength of the conclusions. Future research with a control group, a longer follow-up period, and a more diverse participant pool is warranted to confirm these findings and explore the long-term sustainability of these interventions in improving patient resilience and QOL.



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4.4 BIOSTATISTICS AND RESEARCH METHODOLOGY (THEORY)

Theory : 2 Hrs. /Week

1. Detailed syllabus and lecture wise schedule

1 Research Methodology

- a) Types of clinical study designs:
Case studies, observational studies, interventional studies,
- b) Designing the methodology
- c) Sample size determination and Power of a study
Determination of sample size for simple comparative experiments, determination of sample size to obtain a confidence interval of specified width, power of a study
- d) Report writing and presentation of data

2 Biostatistics

2.1 a) Introduction

- b) Types of data distribution
- c) Measures describing the central tendency distributions- average, median, mode
- d) Measurement of the spread of data-range, variation of mean, standard deviation, variance, coefficient of variation, standard error of mean.

2.2 Data graphics

Construction and labeling of graphs, histogram, piecharts, scatter plots, semilogarithmic plots

2.3 Basics of testing hypothesis

- a) Null hypothesis, level of significance, power of test, P value, statistical estimation of confidence intervals.
- b) Level of significance (Parametric data)- students t test (paired and unpaired), chi Square test, Analysis of Variance (one-way and two-way)
- c) Level of significance (Non-parametric data)- Sign test, Wilcoxon's signed rank test, Wilcoxon rank sum test, Mann Whitney U test, Kruskal-Wallis test (one way ANOVA)
- d) Linear regression and correlation- Introduction, Pearson's and Spearman's correlation and correlation co-efficient.
- e) Introduction to statistical software: SPSS, Epi Info, SAS.



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2.4 Statistical methods in epidemiology

Incidence and prevalence, relative risk, attributable risk

3. Computer applications in pharmacy

Computer System in Hospital Pharmacy: Patterns of Computer use in Hospital Pharmacy – Patient record database management, Medication order entry – Drug labels and list – Intravenous solution and admixture, patient medication profiles, Inventory control, Management report & Statistics.

Computer In Community Pharmacy

Computerizing the Prescription Dispensing process

Use of Computers for Pharmaceutical Care in community pharmacy

Accounting and General ledger system

Drug Information Retrieval & Storage :

Introduction – Advantages of Computerized Literature Retrieval

Use of Computerized Retrieval

Reference books:

- a. Pharmaceutical statistics- practical and clinical applications, Sanford Bolton 3rd edition, publisher Marcel Dekker Inc. NewYork.
- b. Drug Information- A Guide for Pharmacists, Patrick M Malone, Karen L Kier, John E Stanovich , 3rd edition, McGraw Hill Publications 2006



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ASSESSMENT OF PREVALENCE OF FIBROSIS IN NON-ALCOHOLIC FATTY LIVER DISEASE PATIENTS USING FIBROSCAN: INTEGRATING PATIENT EDUCATION FOR EFFECTIVE DISEASE MANAGEMENT IN A TERTIARY CARE HOSPITAL

The thesis work submitted to



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-
KAKINADA**

*In partial fulfillment for the award of the Degree of
DOCTOR OF PHARMACY*

Submitted by

ALLAVARAPU MANOGNA	(193G1T0002)
BOKKA PRADEEPTHI	(193G1T0004)
JAKKULA SUPRIYA	(193G1T0012)
NISAR AHMED	(193G1T0016)

Under the esteemed guidance of

CLINICAL GUIDE

Dr. R. SRINIVAS MURTY

MBBS, MD, DM

Sr. Consultant Gastroenterologist

Trust Multispeciality Hospitals, Kakinada

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Ms. P. RATNA KUMARI, M. Pharm

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2024



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Aditya Nagar, ADB Road, Surampalem-533437, Andhra Pradesh, India

DECLARATION

We hereby declare that the thesis entitled "ASSESSMENT OF PREVALENCE OF FIBROSIS IN NON-ALCOHOLIC FATTY LIVER DISEASE PATIENTS USING FIBROSCAN: INTEGRATING PATIENT EDUCATION FOR EFFECTIVE DISEASE MANAGEMENT IN A TERTIARY CARE HOSPITAL" is a bonafide project work carried out by us under the guidance of *Ms. P. Ratna Kumari, Associate Professor, Department of Pharmacy Practice, Aditya Pharmacy College (A)* and *Dr. R. Srinivas Murty, Senior Consultant Gastroenterologist and Hepatologist at Trust Multispecialty Hospitals, Kakinada*, in partial fulfillment of the requirements for the Award of the Degree of Doctor of Pharmacy in the Department of Pharmacy Practice to Jawaharlal Nehru Technological University-Kakinada (JNTU-K). The work embodied in this thesis is original and has not been submitted in part or in full for any degree of this or any other university.

Place: Surampalem

Date:

Allavarapu Manogna

Bokka Pradeepthi

Jakkula Supriya

Nisar Ahmed

A. Manogna

B. Pradeepthi

J. Supriya

Nisar Ahmed



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CERTIFICATE BY THE GUIDES

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Dr. D. Sathis Kumar,
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Place: Surampalem

Date:

11/11/24

Internal Examiner Signature

External Examiner Signature



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9) CONCLUSION

Our prospective observational study aimed to assess the prevalence of fibrosis in NAFLD patients. We found a high prevalence of both fibrosis and NAFLD in our study sample, largely attributed due to the higher prevalence of overweight/obesity and sedentary lifestyle. The correlation between obesity, as indicated by BMI, and the severity of liver involvement accentuates the importance of weight management interventions in mitigating the progression of NAFLD. Patients with conditions like diabetes and high blood pressure are also more likely to develop NAFLD. Our findings align with existing literature, emphasizing the global burden of NAFLD and the necessity for tailored interventions to address its multifactorial etiology.

The high prevalence rates of NAFLD and fibrosis emphasize the urgent need for increased awareness and proactive screening strategies, particularly among populations with associated risk factors such as obesity, diabetes mellitus, hypertension, and metabolic syndrome.




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2.2 PHARMACEUTICAL MICROBIOLOGY (THEORY)

Theory : 3 Hrs. /Week

- 1. Scope of the Subject:** Microbiology has always been an essential component of pharmacy curriculum. This is because of the relevance of microbiology to pharmaceutical sciences and more specifically to pharmaceutical industry. Pharmaceutical biotechnology is the logical extension of pharmaceutical microbiology, which is expected to change the complete drug product scenario in the future.

This course deals with the various aspects of microorganisms, its classification, morphology, laboratory cultivation identification and maintenance. It also discusses with sterilization of pharmaceutical products, equipment, media etc. The course further discusses the immunological preparations, diseases its transmission, diagnosis, control and immunological tests.

2. Objectives of the Subject :

Upon completion of the subject student shall be able to –

- a. know the anatomy, identification, growth factors and sterilization of microorganisms;
- b. know the mode of transmission of disease causing microorganism, symptoms of disease, and treatment aspect;
- c. do estimation of RNA and DNA and there by identifying the source;
- d. do cultivation and identification of the microorganisms in the laboratory;
- e. do identification of diseases by performing the diagnostic tests; and
- f. appreciate the behavior of motility and behavioral characteristics of microorganisms.

Text books (Theory)

- a. Vanitha Kale and Kishor Bhusari “ Applied Microbiology ” Himalaya Publishing house Mumbai.
- b. Mary Louis Turgeon “ Immunology and Serology in Laboratory Medicines” 2nd edition, 1996 Mosby- Year book inc St. Louis Missouri 63146.
- c. Harsh Mohan, “ Text book of Pathology” 3rd edition, 1998, B-3 Ansari road Darya ganj N. Delhi.

Reference books (Theory)

- a. Prescott L.M., Jarley G.P Klein D.A “Microbiology” 2nd - edition Mc Graw Hill Company Inc
- b. Rawlins E.A.”Bentley’s Text Book of Pharmaceutics” B ailliere Tindals 24-28 London 1988
- c. Forbisher “ Fundamentals of Microbiology” Philadelphia W.B. Saunders.
- d. Prescott L.M. Jarley G.P., Klein.D.A. “ Microbiology.”2nd edition WMC Brown Publishers, Oxford. 1993
- e. War Roitt, Jonathan Brostoff, David male, “ Immunology”3rd edition 1996, Mosby-year book Europe Ltd, London.
- f. Pharmacopoeia of India, Govt of India, 1996.



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3. Detailed syllabus and lecture wise schedule :

Title of the topic

- 1 Introduction to the science of microbiology. Major divisions of microbial world and Relationship among them.
- 2 Different methods of classification of microbes and study of Bacteria, Fungi, virus, Rickettsiae, Spirochetes.
- 3 Nutritional requirements, growth and cultivation of bacteria and virus. Study of different important media required for the growth of aerobic and anaerobic bacteria & fungi. Differential media, enriched media and selective media, maintenance of lab cultures.
- 4 Different methods used in isolation and identification of bacteria with emphasis to different staining techniques and biochemical reactions. Counting of bacteria -Total and Viable counting techniques.
- 5 Detailed study of different methods of sterilization including their merits and demerits. Sterilization methods for all pharmaceutical products. Detailed study of sterility testing of different pharmaceutical preparations . Brief information on Validation.
- 6 Disinfectants- Study of disinfectants, antiseptics, fungicidal and virucidal agents factors affecting their activation and mechanism of action. Evaluation of bactericidal, bacteristatic, , virucidal activities, evaluation of preservatives in pharmaceutical preparations.
- 7 Immunology- Immunity, Definition, Classification, General principles of natural immunity, Phagocytosis, acquired immunity(active and passive) . Antigens, chemical nature of antigens structure and formation of Antibodies, Antigen-Antibody reactions. Bacterial exotoxins and endotoxins. Significance of toxoids in active immunity, Immunization programme, and importance of booster dose.
- 8 Diagnostic tests : Schick's Test, Elisa test, Western Blot test, Southern Blot PCR Widal, QBC, Mantoux Peripheral smear. Study of malarial parasite.
- 9 Microbial culture sensitivity Testing: Interpretation of results Principles and methods of different microbiological assays, microbiological assay of Penicillin, Streptomycin and vitamin B₂ and B₁₂. Standardisation of vaccines and sera.
- 10 Study of infectious diseases: Typhoid, Tuberculosis, Malaria, Cholera, Hepatitis, Meningitis, Syphilis & Gonorrhea and HIV.

2.2 PHARMACEUTICAL MICROBIOLOGY (PRACTICAL)

Practical : 3 Hrs./Week

Title of the Experiment:

- 1 Study of apparatus used in experimental microbiology*.
- 2 Sterilisation of glass ware's. Preparation of media and sterilisation.*
- 3 Staining techniques – Simple staining ; Gram's staining ; Negative staining**
- 4 Study of motility characters*.
- 5 Enumeration of micro-organisms (Total and Viable)*
- 6 Study of the methods of isolation of pure culture.*
- 7 Bio chemical testing for the identification of micro*-organisms.



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ASSESSING THE EFFECTIVENESS OF NUTRITIONAL
COUNSELLING ON QUALITY OF LIFE IN HAEMODIALYSIS
PATIENTS : AN OBSERVATIONAL STUDY

The thesis work submitted to



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-
KAKINADA

In partial fulfillment for the award of the Degree of
DOCTOR OF PHARMACY

Submitted by

Gudivada Sankeerthana	(193G1T0011)
Sankhanil Panda	(193G1T0018)
Vanarasi Sri Satya Manojna Naidu	(193G1T0022)
Yati Raj	(193G1T0024)

Under the esteemed guidance of

HOSPITAL GUIDE

Dr. Sana Praveen

MRCP (UK), CCT (Nephrology)

Senior Consultant, Nephrology

Trust Multispeciality Hospitals, Kakinada

INSTITUTIONAL GUIDE

Dr. Pavan Kumar Yanamadala

PharmD

Associate Professor

Aditya Pharmacy College (A)



DEPARTMENT OF PHARMACY PRACTICE

ADITYA PHARMACY COLLEGE (A)

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DECLARATION

I hereby declare that the thesis entitled "ASSESSING THE EFFECTIVENESS OF NUTRITIONAL COUNSELLING ON QUALITY OF LIFE IN HAEMODIALYSIS PATIENTS : AN OBSERVATIONAL STUDY" is a bonafide project work carried out by me under the guidance of *Dr. Pavan Kumar Yanamadala, Professor, Aditya Pharmacy College (A)* and *Dr. Sana Praveen, Senior Consultant Nephrologist at Trust Multispeciality Hospitals, Kakinada*, in partial fulfillment of the requirements for the Award of the Degree of Doctor of Pharmacy in the Department of Pharmacy Practice to Jawaharlal Nehru Technological University-Kakinada (JNTU-K). The work embodied in this thesis is original and has not been submitted in part or in full for any degree of this or any other university.

Place: Surampalem

Date: 10/05/2024

Gudivada Sankeerthana
Sankhanil Panda
Vanarasi Sri Satya Manojna Naidu
Yati Raj

G. Sankeerthana
Sankhanil Panda
V. S. S. Manojna Naidu
Yati Raj



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CERTIFICATE BY THE GUIDES

This is to certify that the thesis work entitled "ASSESSING THE EFFECTIVENESS OF NUTRITIONAL COUNSELLING ON QUALITY OF LIFE IN HAEMODIALYSIS PATIENTS: AN OBSERVATIONAL STUDY" is a bonafide Project work carried out by Gudivada Sankeerthana (193G1T0011), Sankhanil Panda (193G1T0018), Vanarasi Sri Satya Manojna Naidu (193G1T0022), Yati Raj (193G1T0024), under the guidance of us at the Department of Pharmacy Practice, Aditya Pharmacy College (A), and Dept. of Nephrology, Trust Multispeciality Hospitals, Kakinada. In our opinion, this work has reached the standards in fulfillment of the partial requirement for the award of the degree of Doctor of Pharmacy per the regulations of the University.

Place: Surampalem & Kakinada

Date:

HOSPITAL GUIDE

Dr. SANA PRAVEEN

MRCP (UK), CCT (Nephrology)

Senior Consultant, Nephrology

Trust Multispeciality Hospitals, Kakinada

Dr. PRAVEEN SANA
CONSULTANT NEPHROLOGIST
MRCP (UK), CCT (NEPHROLOGY)
Reg. No. 330209



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Dr. Pavan Kumar Yanamadala

PharmD

Associate Professor

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CERTIFICATE BY THE PRINCIPAL

This is to certify that the thesis work entitled, "ASSESSING THE EFFECTIVENESS OF NUTRITIONAL COUNSELLING ON QUALITY OF LIFE IN HAEMODIALYSIS PATIENTS : AN OBSERVATIONAL STUDY" is being submitted by Gudivada Sankeerthana (193G1T0011), Sankhanil Panda (193G1T0018), Vanarasi Sri Satya Manojna Naidu (193G1T0022), Yati Raj (193G1T0024), to Jawaharlal Nehru Technological University, Kakinada (JNTUK), in partial fulfillment for the award of the degree of DOCTOR OF PHARMACY in the Department of Pharmacy Practice under the guidance of Dr. Pavan Kumar Yanamadala, PharmD, Associate Professor, is the bonafide project work carried out by them at Aditya Pharmacy College (A), Surampalem & Trust Multispeciality Hospitals, Kakianda.

The results incorporated in this work have not been submitted to any other university or institute for the award of any degree.

Dr. D. Sathis Kumar

M.Pharm, Ph.D

Principal

Aditya Pharmacy College (A)

Surampalem-533437

Place: Surampalem

Date: 12/5/24



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EVALUATION CERTIFICATE

This is to certify that the thesis work entitled, "ASSESSING THE EFFECTIVENESS OF NUTRITIONAL COUNSELLING ON QUALITY OF LIFE IN HAEMODIALYSIS PATIENTS: AN OBSERVATIONAL STUDY" is a bonafide Project work done Gudivada Sankeerthana (193G1T0011), Sankhanil Panda (193G1T0018), Vanarasi Sri Satya Manojna Naidu (193G1T0022), Yati Raj (193G1T0024), submitted in partial fulfillment for the award of the degree of DOCTOR OF PHARMACY in the Department of Pharmacy Practice to Jawaharlal Nehru Technological University, Kakinada (JNTUK).

Place: Surampalem

Date: 10/5/24

Internal Examiner

External Examiner

Sign:

Sign:



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CONCLUSION: -

The study conducted aimed at finding out the impact and the effectiveness of nutritional counselling which was being provided to the patients as a method of improving their quality of life. The difference in the quality of life of the patients undergoing regular haemodialysis before they were provided with the nutritional counselling and after they were provided with the nutritional counselling acts as the parameter of measuring the difference in quality of life and to check if there is any improvement which was statistically significant.

Based upon the results obtained from the statistical analysis, it can be concluded that since the calculated p value at 0.05 level of significance (α) is less than the critical p value at the same level of significance, the null hypothesis is rejected.

Therefore, the alternate hypothesis is accepted and the statistical analysis leads to the conclusion that there is a statistically significant difference between the Quality-of-Life scores obtained prior to the patient receiving nutritional and dietary counselling and the Quality-of-Life scores obtained subsequent to the patient receiving such counselling.

Thus, it can be concluded that the nutritional counselling provided to the patient is having a statistically significant impact and is effective in Improving the Quality of Life of patients undergoing regular Haemodialysis.



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1.3 MEDICINAL BIOCHEMISTRY (THEORY)

Theory : 3 Hrs. /Week

1. Scope of the Subject: Applied biochemistry deals with complete understanding of the molecular level of the chemical process associated with living cells. Clinical chemistry deals with the study of chemical aspects of human life in health and illness and the application of chemical laboratory methods to diagnosis, control of treatment, and prevention of diseases.

2. Objectives of the Subject (Know, do, appreciate) :

The objective of the present course is providing biochemical facts and the principles to the students of pharmacy. Upon completion of the subject student shall be able to –

- understand the catalytic activity of enzymes and importance of isoenzymes in diagnosis of diseases;
- know the metabolic process of biomolecules in health and illness (metabolic disorders);
- understand the genetic organization of mammalian genome; protein synthesis; replication; mutation and repair mechanism;
- know the biochemical principles of organ function tests of kidney, liver and endocrine gland; and
- do the qualitative analysis and determination of biomolecules in the body fluids.

Text books (Theory)

- Harpers review of biochemistry - Martin
- Text book of biochemistry – D.Satyanarayana
- Text book of clinical chemistry- Alex kaplan & Laverve L.Szabo

Reference books (Theory)

- Principles of biochemistry -- Lehninger
- Text book of biochemistry -- Ramarao
- Practical Biochemistry-David T.Plummer.
- Practical Biochemistry-Pattabhiraman.

3. Lecture wise programme:

Topics

- 1 Introduction to biochemistry:** Cell and its biochemical organization, transport process across the cell membranes. Energy rich compounds; ATP, Cyclic AMP and their biological significance.
- 2 Enzymes:** Definition; Nomenclature; IUB classification; Factor affecting enzyme activity; Enzyme action; enzyme inhibition. Isoenzymes and their therapeutic and diagnostic applications; Coenzymes and their biochemical role and deficiency diseases.
- 3 Carbohydrate metabolism:** Glycolysis, Citric acid cycle (TCA cycle), HMP shunt, Glycogenolysis, gluconeogenesis, glycogenesis. Metabolic disorders of carbohydrate metabolism (diabetes mellitus and glycogen storage diseases); Glucose, Galactose tolerance test and their significance; hormonal regulation of carbohydrate metabolism.



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**DIABETES IN FOCUS: INVESTIGATING THE PREVALENCE AND
ASSESSING RISK FACTORS FOR THE DEVELOPMENT OF MICRO
AND MACROVASCULAR COMPLICATIONS IN PATIENTS WITH
DIABETES MELLITUS**

The thesis work submitted to



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-
KAKINADA**

*In partial fulfilment for the award of the Degree of
DOCTOR OF PHARMACY*

Submitted by

AKASAPU MADHURI	(193G1T0001)
CHILAKA SWARNAKISHORE	(193G1T0006)
THOTA THANMAYI SAI LAKSHMI	(193G1T0021)
VEMANA HEMA RATNA SAI LAKSHMI	(193G1T0023)

Under the esteemed guidance of

CLINICAL GUIDE

Dr. M. Phani Ramana Bhushan

MBBS, MD

Sr. Consultant General Physician

Trust Multispeciality Hospitals, Kakinada

INSTITUTIONAL GUIDE

Dr. P. S.V. M. Deepika

PharmD

Assistant professor

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DECLARATION

We hereby declare that the thesis entitled "DIABETES IN FOCUS: INVESTIGATING THE PREVALENCE AND ASSESSING RISK FACTORS FOR THE DEVELOPMENT OF MICRO AND MACROVASCULAR COMPLICATIONS IN PATIENTS WITH DIABETES MELLITUS" is a bonafide project work carried out by us under the guidance of *Dr. P. S. V. M. Deepika, Assistant Professor, Aditya Pharmacy College (A)* and *Dr. M. Phani Ramana Bhushan, Senior Consultant General Physician at Trust Multispeciality Hospitals, Kakinada*, in partial fulfillment of the requirements for the Award of the Degree of Doctor of Pharmacy in the Department of Pharmacy Practice to Jawaharlal Nehru Technological University-Kakinada (JNTU-K). The work embodied in this thesis is original and has not been submitted in part or in full for any degree of this or any other university.

Place: Surampalem

Date: 06-05-2024

Akasapu Madhuri

Chilaka Swarna Kishore

Thota Thanmayi Sai Lakshmi

Vemana Hema Ratna Sai Lakshmi

A. Madhuri

Ch. Swarna Kishore

Thota Thanmayi Sai Lakshmi

V.H.R. Sai Lakshmi




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CERTIFICATE BY THE GUIDES

This is to certify that the thesis work entitled "DIABETES IN FOCUS: INVESTIGATING THE PREVALENCE AND ASSESSING RISK FACTORS FOR THE DEVELOPMENT OF MICRO AND MACROVASCULAR COMPLICATIONS IN PATIENTS WITH DIABETES MELLITUS" is a bonafide Project work carried out by AKASAPU MADHURI (Reg.No.193G1T0001), CHILAKA SWARNA KISHORE (Reg.No.193G1T0006), THOTA THANMAYI SAI LAKSHMI (Reg. No. 193G1T0021) & VEMANA HEMA RATNA SAI LAKSHMI (Reg. No. 193G1T0023), under the guidance of us at the Department of Pharmacy Practice, Aditya Pharmacy College (A), and Dept. of General Medicine, Trust Multispecialty Hospitals, Kakinada. In our opinion, this work has reached the standards in fulfillment of the partial requirement for the award of the degree of Doctor of Pharmacy per the regulations of the University.

Place: Surampalem & Kakinada

Date: 06-05-2024

Dr. M. PHANI RAMANA BHUSHAN
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CERTIFICATE BY THE PRINCIPAL

This is to certify that the thesis work entitled, "DIABETES IN FOCUS: INVESTIGATING THE PREVALENCE AND ASSESSING RISK FACTORS FOR THE DEVELOPMENT OF MICRO AND MACROVASCULAR COMPLICATIONS IN PATIENTS WITH DIABETES MELLITUS" is being submitted by AKASAPU MADHURI (Reg.No.193G1T0001), CHILAKA SWARNA KISHORE (Reg.No.193G1T006), THOTA THANMAYI SAI LAKSHMI (Reg. No. 193G1T0021) & VEMANA HEMA RATNA SAI LAKSHMI (Reg. No. 193G1T0023) to Jawaharlal Nehru Technological University, Kakinada (JNTUK), in partial fulfilment for the award of the degree of DOCTOR OF PHARMACY in the Department of Pharmacy Practice under the guidance of Dr. P.S.V.M. Deepika, Pharm. D, Assistant Professor, is the bonafide project work carried out by them at Aditya Pharmacy College (A), Surampalem & Trust Multispeciality Hospitals, Kakianda.

The results incorporated in this work have not been submitted to any other university or institute for the award of any degree.

Dr. D. Sathis Kumar,
M. Pharm, Ph. D.

Principal,

Aditya Pharmacy College (A),
Surampalem-533437

Place: Surampalem

Date: 6/5/21

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Place: Surampalem

Date: 01/05/23

Internal Examiner

External Examiner

Sign:

Sign:



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CONCLUSION

From our study we can conclude that the prevalence of macrovascular complications is more when compared to microvascular complications. CAD and Diabetic Nephropathy are highly prevalent. The study shows the prevalence of vascular complications is higher in the subjects with age within the range of 61-70 years, subjects with prolonged duration of diabetes of 6-10 years, positive family history of diabetes, lack of sleep, medical history of hypertension and subjects with uncontrolled blood glucose levels and males are found to be most affected with vascular complications. Early DM screening and investigation are recommended to identify risk factors, target them with tailored treatment and management strategies and prevent complications. To fully analyze and comprehend the potential danger and causative elements, more research investigations must be done. Therefore, there is a need for further study in the field of Diabetes.

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1.1 HUMAN ANATOMY & PHYSIOLOGY (PRACTICAL)

Practical : 3 Hrs./Week

General Requirements: Dissection box, Laboratory Napkin, muslin cloth, record, Observation book(100pages), Stationary items, Blood lancet.

Course materials:

Text books

Goyal, R. K, Natvar M.P, and Shah S.A, Practical anatomy, physiology and biochemistry, latest edition, Publisher: B.S Shah Prakashan, Ahmedabad.

Reference books

Ranade VG, Text book of practical physiology, Latest edition, Publisher: PVG, Pune
Anderson Experimental Physiology, Latest edition, Publisher: NA

List of Experiments:

1. Study of tissues of human body
 - (a) Epithelial tissue.
 - (b) Muscular tissue.
2. Study of tissues of human body
 - (a) Connective tissue.
 - (b) Nervous tissue.
3. Study of appliances used in hematological experiments.
4. Determination of W.B.C. count of blood.
5. Determination of R.B.C. count of blood.
6. Determination of differential count of blood.
7. Determination of
 - (a) Erythrocyte Sedimentation Rate.
 - (b) Hemoglobin content of Blood.
 - (c) Bleeding time & Clotting time.
8. Determination of
 - (a) Blood Pressure.
 - (b) Blood group.
9. Study of various systems with the help of charts, models & specimens
 - (a) Skeleton system part I-axial skeleton.
 - (b) Skeleton system part II- appendicular skeleton.
 - (c) Cardiovascular system.
 - (d) Respiratory system.



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- (e) Digestive system.
- (f) Urinary system.
- (g) Nervous system.
- (h) Special senses.
- (i) Reproductive system.

10. Study of different family planning appliances.
11. To perform pregnancy diagnosis test.
12. Study of appliances used in experimental physiology.
13. To record simple muscle curve using gastrocnemius sciatic nerve preparation.
14. To record simple summation curve using gastrocnemius sciatic nerve preparation.
15. To record simple effect of temperature using gastrocnemius sciatic nerve preparation.
16. To record simple effect of load & after load using gastrocnemius sciatic nerve preparation.
17. To record simple fatigue curve using gastrocnemius sciatic nerve preparation.

Scheme of Practical Examination:

	Sessionals	Annual
Identification	04	10
Synopsis	04	10
Major Experiment	07	20
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of
Human Anatomy and physiology

Name: B: Dhanu Sri

PIN No. 233GIT0004

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. Bhupathi Dhanu Sri

a student of 1st Pharm-D with Regd. No. 233GIT0004

in the HUMAN ANATOMY & PHYSIOLOGY - I
HAP - Laboratory during the year 2023-2024

No. of Experiments Conducted 22

No. of Experiments Attended 22

[Signature] 24/6/24.
Signature - Faculty incharge

[Signature]
Signature-Head of the Department

Submitted for the practical examination held on

[Signature]
Examiner-1

[Signature]
Examiner-2



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
01.	23-11-23	Compound Microscope	01-4	Cypr 30.11.2023
02.	30-11-23	Estimation of Bleeding Time	5-6	Cypr 7.12.2023
03.	7-12-23	Estimation of clotting Time	7-8	Cypr 14.12.2023
04.	14-12-23	Determination of Breath holding Time	09	Cypr 21.12.2023
05.	21-12-23	Determination of Rate of Respiration	10	Cypr 04.01.2024
06.	28-12-23	Determination of Human Blood group	11-12	Cypr 11.01.2024
07.	04-1-24	Estimation of Haemoglobin Content	13-15	Cypr 21/3/24
08.	29-2-24	Study of Haemocytometry.	16-19	9 21/3/24
09.	7-3-24	Enumeration of Red blood Cells.	20-23	
10.	14-3-24	Enumeration of White blood Cells.	24-28	
11.	21-3-24	Determination of Erythrocyte Sedimentation Rate	29-32	



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
12.	21-3-24	Determination of Blood pressure	32-36	9
13.	28-3-24	Determination of Differential Leucocytes.	37-41	
14.	9-4-24	Identification of slides.	42-47	11/11/24
15.	11-4-24	A- Skeletal system (1) Axial B- Skeletal system (2) Appendicular C- Cardiovascular system.	48-50 51-54 55-56	
16.	18-4-24	D- Respiratory system E- Digestive system F- Urinary system	57-58 59-62 63-64	28/11/24
17.	28-4-24	G- Nervous system H- special Senses I - Reproductive System • Male • Female	65-66 67-69 70-71 72-73	
18.	02-5-24	study of different Family Planning Appliances.	74-78	a/5/24
19.	09-5-24	Pregnancy diagnosis Test.	79-81	9
20.	16-5-24	Appliances used in the Experimental physiology.	82-83	
21.	16-5-24	Recording simple Muscle Twitch	84-86	24/6/24
22.	6-6-24	Phenomenon of Fatigue.	87-89	



57.

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- 7 Biphasic dosage forms: Suspensions and emulsions, Definition, advantages and disadvantages, classification, test for the type of emulsion, formulation, stability and evaluation.
- 8 Suppositories and pessaries: Definition, advantages and disadvantages, types of base, method of preparation, Displacement value and evaluation.
- 9 Galenicals: Definition, equipment for different extraction processes like infusion, Decoction, Maceration and Percolation, methods of preparation of spirits, tinctures and extracts.
- 10 Pharmaceutical calculations.
- 11 Surgical aids: Surgical dressings, absorbable gelatin sponge, sutures, ligatures and medicated bandages.
- 12 Incompatibilities: Introduction, classification and methods to overcome the incompatibilities.

1.2 PHARMACEUTICS (PRACTICAL)

Practical : 3 Hrs./Week

List of Experiments:

- 1. Syrups**
 - a. Simple Syrup I.P
 - b. Syrup of Ephedrine Hcl NF
 - c. Syrup Vasaka IP
 - d. Syrup of ferrous Phosphate IP
 - e. Orange Syrup
- 2. Elixir**
 - a. Piperizine citrate elixir BP
 - b. Cascara elixir BPC
 - c. Paracetamol elixir BPC
- 3. Linctus**
 - a. Simple Linctus BPC
 - b. Pediatric simple Linctus BPC
- 4. Solutions**
 - a. Solution of cresol with soap IP
 - b. Strong solution of ferric chloride BPC
 - c. Aqueous Iodine Solution IP
 - d. Strong solution of Iodine IP
 - e. Strong solution of ammonium acetate IP



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5. **Liniments**
 - a. Liniment of turpentine IP*
 - b. Liniment of camphor IP
6. **Suspensions***
 - a. Calamine lotion
 - b. Magnesium Hydroxide mixture BP
7. **Emulsions***
 - a. Cod liver oil emulsion
 - b. Liquid paraffin emulsion
8. **Powders***
 - a. Eutectic powder
 - b. Explosive powder
 - c. Dusting powder
 - d. Insufflations
9. **Suppositories***
 - a. Boric acid suppositories
 - b. Chloral suppositories
10. **Incompatibilities**
 - a. Mixtures with Physical
 - b. Chemical & Therapeutic incompatibilities

* colourless bottles required for dispensing * Paper envelope (white), butter paper and white paper required for dispensing.

Scheme of Practical Examination:

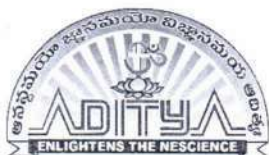
	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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PRINCIPAL
Aditya Pharmacy College
SURAMPALM-533 437



ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of

PHARMACEUTICS

Name: V. Vahini

PIN No. 23361T0029

*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. VEERANALA VAHINI

a student of 1st PHARM.D with Regd. No. 23361T0029

in the PHARMACEUTICS Laboratory during the year 2023-24

No. of Experiments Conducted 31

No. of Experiments Attended 31

G. Saideen

Signature - Faculty incharge

[Signature]

Signature-Head of the Department

PRINCIPAL

Aditya Pharmacy College

Submitted for the practical examination held on SURAMPALEM-2024

A. Anand

Examiner-1

[Signature]

Examiner-2



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S.No.	Date	Name of the Experiment	Page No.	Remarks
1)	25/11/23	simple syrup (I.P)	6-7	B
2)	2/12/23	orange syrup (I.P)	pg-8-9	
3)	9/12/23	vasaka syrup (I.P)	pg-10-11	
4)	16/12/23	compound ferric phosphate (B.P.C)	12-14	
5)	16/12/23	ephedrine hydrochloride syrup (I.P)	15-16	
6)	23/12/23	paracetamol pediatric elixir (B.P.C)	18-19	
7)	30/12/23	piperaquine citrate elixir (B.P.C)	20-21	
8)	6/1/24	castor oil elixir (B.P.C)	22-23	
9)	27/1/24	simple linctus (B.P.C)	25-26	
10)	27/1/24	Pediatric simple linctus	27-	
11)	3/2/24	Aqueous iodine solution	29-30	B
12)	10/2/24	strong iodine solution	31-32	
13)	17/2/24	CRESOL SOAP SOLUTION (I.P)	33-34	
14)	2/3/24	STRONG AMMONIUM ACETATE SOLUTION (I.P)	35-36	
15)	16/3/24	CAMPOR LINIMENT (I.P)	38-39	
16)	16/3/24	TURPENTINE LINIMENT (I.P)	40-41	
17)	23/3/24	CALAMINE LOTION	42-43	
18)	6/4/24	MAGNESIUM HYDROXIDE MIXTURE (B.P.C)	44-46	
19)	20/4/24	LIQUID PARAFFIN EMULSION	47-48	
20)	27/4/24	COD LIVER OIL EMULSION	49-50	
21)	27/4/24	ZINC OXIDE STARCH DUSTING POWDER (NFI)	53-	B
22)	11/5/24	EUTECTIC POWDER	54	
23)	18/5/24	EXPLOSIVE POWDER	55	
24)	8/6/24	BORIC ACID SUPPOSITORIES	58-59	
25)	15/6/24	CHLORAL HYDRATE SUPPOSITORIES	60-61	
26)	22/6/24	EMULSION	62	
27)	22/6/24	MIXTURE - I	64	
28)	29/6/24	MIXTURE - II	65	



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[illegible]

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1.3 MEDICINAL BIOCHEMISTRY (PRACTICAL)

Practical : 3 Hrs./Week

Title of the Experiment:

- 1 Qualitative analysis of normal constituents of urine.*
- 2 Qualitative analysis of abnormal constituents of urine.*
- 3 Quantitative estimation of urine sugar by Benedict's reagent method.**
- 4 Quantitative estimation of urine chlorides by Volhard's method.**
- 5 Quantitative estimation of urine creatinine by Jaffe's method.**
- 6 Quantitative estimation of urine calcium by precipitation method.**
- 7 Quantitative estimation of serum cholesterol by Libermann Burchard's method.**
- 8 Preparation of Folin Wu filtrate from blood.*
- 9 Quantitative estimation of blood creatinine.**
- 10 Quantitative estimation of blood sugar Folin-Wu tube method.**
- 11 Estimation of SGOT in serum.**
- 12 Estimation of SGPT in serum.**
- 13 Estimation of Urea in Serum.**
- 14 Estimation of Proteins in Serum.**
- 15 Determination of serum bilirubin**
- 16 Determination of Glucose by means of Glucoseoxidase.**
- 17 Enzymatic hydrolysis of Glycogen/Starch by Amylases.**
- 18 Study of factors affecting Enzyme activity. (pH & Temp.)**
- 19 Preparation of standard buffer solutions and its pH measurements (any two)*
- 20 Experiment on lipid profile tests**
- 21 Determination of sodium, calcium and potassium in serum.**

** indicate major experiments & * indicate minor experiments

Assignments:

Format of the assignment

1. Minimum & Maximum number of pages.
2. It shall be computer draft copy.
3. Reference(s) shall be included at the end.
4. Name and signature of the student.
5. Assignment can be a combined presentation at the end of the academic year.
6. Time allocated for presentation may be 8+2 Min.

Scheme of Practical Examination:

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada. Dist., (A.P.)

Department of

Name: DEVYANI SINGH...

PIN No.

2	3	3	6	1	T	0	0	1	0
---	---	---	---	---	---	---	---	---	---

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. Devyani Singh

a student of 1st PharmD with Regd. No. 23361T0010

in the Medicinal Biochemistry Laboratory during the year 2023-2024

No. of Experiments Conducted

22

No. of Experiments Attended

22

C. V. Muthu

Signature - Faculty incharge

2024

Signature-Head of the Department

Submitted for the practical examination held on 23/7/2024

Examiner-1

Examiner-2



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	25/11/23	Introduction (General Instruction)	1-2	<u>I</u>
2.	25/12/23	Qualitative analysis of normal constituents of urine.	3-8	<u>I</u>
3.	9/12/23	Qualitative analysis of abnormal constituents of urine.	9-15	<u>I</u>
4.	23/12/23	Quantitative estimation of Urine chloride by Volhard Arnold method.	16-18	<u>I</u>
5.	16/12/23	Quantitative estimation of glucose in urine by Benedict's Reagent method.	19-20	<u>I</u>
6.	30/12/23	Quantitative Estimation of Creatinine by Jaffe's method	21-23	<u>I</u>
7.	6/1/24	Quantitative Estimation of Urine Calcium by Precipitation method.	24-25	<u>I</u>
8.	20/1/24	Quantitative Estimation of Serum Cholesterol (By Libermann Burchard's Method)	26-27	<u>I</u>
9.	27/1/24	Quantitative Estimation of Blood Creatinine	28-29	<u>I</u>
10.	²⁷ 08/2/24	Preparation of Folin-Wu filtrate from Blood	30-31	<u>I</u>
11.	08/2/24	Quantitative estimation of Blood Sugar Folin-Wu tube Method.	32-34	<u>I</u>
12.	10/2/24	Estimation of Serum ^{SGOT} ^{PRINCIPAL}	35-37	<u>I</u>



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
13.	2/3/24	Estimation of SGPT in Serum	38 - 39	<u>l</u>
14.	9/3/24	Estimation of urea in Serum	40 - 42	<u>l</u>
15.	16/3/24	Estimation of protein in Serum	43 - 45	<u>l</u>
16.	23/3/24	Estimation of cholesterol in Serum.	46 - 48	<u>l</u>
17.	30/3/24	Determination of Serum Bilirubin	49	<u>l</u>
18.	6/4/24	Determination of Glucose by means of glucose oxidase	50 - 51	<u>l</u>
19.	20/4/24	Enzymatic hydrolysis of glycogen / starch by amylases	52 - 54	<u>l</u>
20.	27/4/24	Study of temperature effecting enzyme activity	55 - 57	<u>l</u>
21.	27/4/24	Preparation of Standard Buffer solution and its pH measurement.	58 - 60	<u>l</u>
22.	11/5/24	Determination of Calcium in Serum	61 - 63	<u>l</u>
23.	18/5/24	Determination of Sodium and potassium in serum.	64 - 66	<u>l</u>



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- 12 Mechanism of aldol condensation, claisen condensation, cannizzaro reaction, crossed aldol condensation, crossed cannizzaro reaction, benzoin condensation, perkin condensation. Knoevenagel, Reformatsky reaction, Wittig reaction, Michael addition.
- 13 Hoffman rearrangement: Migration to electron deficient nitrogen, Sandmeyer's reaction, basicity of amines, diazotisation and coupling, acidity of phenols, Williamson synthesis, Fries rearrangement, Kolbe reaction, Reimer tieman's reactions.
- 14 Nucleophilic aromatic substitution: Bimolecular displacement mechanisms, orientation, comparison of aliphatic nucleophilic substitution with that of aromatic.
- 15 Oxidation reduction reaction.
- 16 Study of the following official compounds- preparation, test for purity, assay and medicinal uses of Chlorbutol, Dimercaprol, Glyceryl trinitrate, Urea, Ethylene diamine dihydrate, Vanillin, Paraldehyde, Ethylene chloride, Lactic acid, Tartaric acid, citric acid, salicylic acid, aspirin, methyl salicylate, ethyl benzoate, benzyl benzoate, dimethyl pthalate, sodium lauryl sulphate, saccharin sodium, mephensin.

1.4 PHARMACEUTICAL ORGANIC CHEMISTRY (PRACTICAL)

Practical : 3 Hrs./Week

I. Introduction to the various laboratory techniques through demonstration involving synthesis of the following compounds (at least 8 compounds to be synthesised):

1. Acetanilide / aspirin (Acetylation)
2. Benzanilide / Phenyl benzoate (Benzoylation)
3. P-bromo acetanilide / 2,4,6 – tribromo aniline (Bromination)
4. Dibenzylidene acetone (Condensation)
5. 1-Phenylazo-2-naphthol (Diazotisation and coupling)
6. Benzoic acid / salicylic acid (Hydrolysis of ester)
7. M-dinitro benzene (Nitration)
8. 9, 10 – Anthraquinone (Oxidation of anthracene) / preparation of benzoic acid from toluene or benzaldehyde
9. M-phenylene diamine (Reduction of M-dinitrobenzene) / Aniline from nitrobenzene
10. Benzophenone oxime
11. Nitration of salicylic acid
12. Preparation of picric acid
13. Preparation of O-chlorobenzoic acid from O-chlorotoluene
14. Preparation of cyclohexanone from cyclohexanol



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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of
Organic Chemistry

Name: P. Jyothirmai Sai Satya Sri

PIN No. 23361T0023

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. P. Jyothirmai Sai Satya Sri

a student of 1st Pharm-D with Regd. No. 23361T0023

in the Organic Chemistry laboratory during the year 2023-24

No. of Experiments Conducted 28

No. of Experiments Attended 28

Signature [Signature] Faculty incharge

Signature [Signature] Head of the Department

PRINCIPAL

Aditya Pharmacy College

Submitted for the practical examination held on SURAMPATEM-533 437

Examiner-1 [Signature]

Examiner-2 [Signature]



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	4/12/23	Chemistry laboratory rules and Safety precautions	01	
2.	11/12/23	Basic laboratory Techniques for Separation & purification	02 - 10	
3.	18/12/23	ACETYLATION	11	
4.	8/1/24	preparation of Aspirin	12 - 13	
5.	22/1/24	preparation of Acetanilide	14 - 15	
6.	29/1/24	BENZYLATION	16	
7.	5/2/24	preparation of Benzanilide	17 - 18	
8.	12/2/24	preparation of Benzophenone Oxime	19 - 20	
9.	26/2/24	BROMINATION	21	
10.	4/3/24	preparation of p-Bromo Acetanilide	22 - 23	
11.	11/3/24	NITRATION	24	
12.	18/3/24	preparation of nitrobenzene	25 - 26	
13.	11/4/24	ACETYLATION	27	
14.	8/4/24	preparation of Benzoic acid from Benzanilide	27 - 28	
15.	15/4/24	preparation of phenyl Azo β -naphthol	28 - 29	
16.	22/4/24	preparation of Dibenzylidene Acetone	30 - 31	
17.	6/5/24	Systematic Quantitative Analysis of organic Compound	32 - 53	
18.	6/5/24	Sample - I	54 - 56	
19.	13/5/24	Sample - II	57 - 58	



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S.No.	Date	Name of the Experiment	Page No.	Remarks
20	31/6/24	Sample - III	59 - 60	<i>[Signature]</i>
21	10/6/24	Sample - IV	61 - 63	<i>[Signature]</i>
22	24/6/24	Sample - V	64 - 65	<i>[Signature]</i>
23	1/7/24	Sample - VI	66 - 67	<i>[Signature]</i>
24	1/7/24	Sample - VII	68 - 70	<i>[Signature]</i>
25	8/7/24	Sample - VIII	71 - 72	<i>[Signature]</i>
26	8/7/24	Sample - IX	73 - 74	<i>[Signature]</i>
27	8/7/24	Sample - X	75 - 76	<i>[Signature]</i>
28.	8/7/24	STEREO MODELS	77 - 79	<i>[Signature]</i>

[Signature]

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- 16 Essential Trace elements
- 17 Antimicrobials
- 18 Pharmaceutical aids
- 19 Dental Products
- 20 Miscellaneous compounds
- 21 Radio Pharmaceuticals

1.5 PHARMACEUTICAL INORGANIC CHEMISTRY (PRACTICAL)

Practical : 3 Hrs./Week

1. Limit test (6 exercises)

- a. Limit test for chlorides
- b. Limit test for sulphates
- c. Limit test for iron
- d. Limit test for heavy metals
- e. Limit test for arsenic
- f. Modified limit tests for chlorides and sulphates

2. Assays (10 exercises)

- a. Ammonium chloride- Acid-base titration
- b. Ferrous sulphate- Cerimetry
- c. Copper sulphate- Iodometry
- d. Calcilugluconate- Complexometry
- e. Hydrogen peroxide – Permanganometry
- f. Sodium benzoate – Nonaqueous titration
- g. Sodium chloride – Modified volhard's method
- h. Assay of KI – KIO_3 titration
- i. Gravimetric estimation of barium as barium sulphate
- j. Sodium antimony gluconate or antimony potassium tartarate

3. Estimation of mixture (Any two exercises)

- a. Sodium hydroxide and sodium carbonate
- b. Boric acid and Borax
- c. Oxalic acid and sodium oxalate

4. Test for identity (Any three exercises)

- a. Sodium bicarbonate
- b. Barium sulphate
- c. Ferrous sulphate
- d. Potassium chloride



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SURAMPALAM-533 437

5. Test for purity (Any two exercises)

- Swelling power in Bentonite
- Acid neutralising capacity in aluminium hydroxide gel
- Ammonium salts in potash alum
- Adsorption power heavy Kaolin
- Presence of Iodates in KI

6. Preparations (Any two exercises)

- Boric acids
- Potash alum
- Calcium lactate
- Magnesium sulphate

Scheme of Practical Examination :

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment 1 & 2	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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SURAMPALAM-533 437

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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada. Dist., (A.P.)

Department of Inorganic Chemistry

Name: P. Tyothirmai

PIN No. 23341T0023

*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. P. Tyothirmai Sai Satya Sri

a student of Pharm.D with Regd. No. 23341T0023

in the Inorganic Chem Laboratory during the year 2023-24

No. of Experiments Conducted 35

No. of Experiments Attended 35

Signature - Faculty incharge

Signature-Head of the Department

Submitted for the practical examination held on

Examiner-1

Examiner-2

PRINCIPAL
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SURAMPALM-533 437



Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	14/12/23	Apparatus used in Volumetric Analysis	1 - 7	
		Calibration of Analytic Apparatus	8 - 9	
2.	21/12/23	Standardization of Hydrochloric Acid	10 - 11	
3.	28/12/23	ASSay of Borax	12 - 13	
4.	4/1/24	Standardization of Sodium Hydroxide	14 - 15	
5.	11/1/24	Assay of Ammonium chloride	16 - 17	
6.	18/1/24	ASSay of Sodium Bicarbonate	18 - 19	
7.	1/2/24	ASSay of Boric acid	20 - 21	
8.	8/2/24	ASSay of calcium Bicarbonate	22 - 23	
		NON - AQUEOUS TITRATIONS	24	
9.	15/2/24	Standardization of perchloric acid	25 - 26	
10.	29/2/24	ASSay of Sodium Benzoate	27 - 28	
		COMPLEXOMETRIC TITRATIONS	29	
11.	7/3/24	Standardization of Disodium EDTA	30 - 31	
12.	14/3/24	ASSay of calcium Gluconate	32 - 33	
		REDOX TITRATIONS	34	
		CERIMETRY	35	
13.	21/3/24	ASSay of Ferrous Sulphate	36 - 37	
		PERMANGANOMETRY	38	
14.	28/3/24	ASSay of Hydrogen peroxide	39 - 40	
		IODIMETRY	41	
15.	4/4/24	Standardization of 0.05M of I ₂ Solution using AS ₂ O ₃	42 - 43	
16.	4/4/24	ASSay of Sodium ThioSulphate	44 - 45	
17.	18/4/24	Standardization of Sodium ThioSulphate Solution (0.1M)	46 - 47	



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SURAMPALM-533 437

Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
18.	18/4/24	ASSay of Copper Sulphate	48-49	
19.	9/5/24	ASSay of NaCl	50-53	
		POTASSIUM IODATE TITRATION	54	
20.	9/5/24	ASSay of potassium Iodide	55-56	
21.	16/5/24	Gravimetric Estimation of Barium as Barium Sulphate	57-58	
22.	16/5/24	preparation of potash Alum	59	
23.	30/5/24	preparation of magnesium Sulphate	60	
24.	30/5/24	preparation of Boric acid	61-62	
25.	6/6/24	Swelling power of Bentonite	63	
26.	6/6/24	Neutralisation Capacity of $Al(OH)_3$	64-65	
27.	13/6/24	Determination of mixture of Sodium carbonate in Sodium Hydroxide.	66-67	
28.	13/6/24	Identification of Barium Sulphate	68	
29.	20/6/24	Identification of ferrous Sulphate	69	
30.	20/6/24	Identification of potassium Chloride	70	
		LIMIT TESTS	71-72	
31.	27/6/24	limit test for chlorides	73-74	
32.	27/6/24	limit test for Sulphates	75-76	
33.	4/7/24	limit test for Iron	77-78	
34.	4/7/24	limit test for Heavy metals	79-82	
35.	11/7/24	limit test for Arsenic	83-85	



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ADITYA PHARMACY COLLEGE(A)
SURAMPALAM-533 437

1.6 BIOLOGY (PRACTICAL)

Practical : 3 Hrs./Week

Title:

1. Introduction of biology experiments
2. Study of cell wall constituents and cell inclusions
3. Study of Stem modifications
4. Study of Root modifications
5. Study of Leaf modifications
6. Identification of Fruits and seeds
7. Preparation of Permanent slides
8. T.S. of Senna, Cassia, Ephedra, Podophyllum.
9. Simple plant physiological experiments
10. Identification of animals
11. Detailed study of Frog
12. Computer based tutorials

Scheme of Practical Examination :

	Sessionals	Annual
Identification	04	10
Synopsis	04	10
Major Experiment	07	20
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance.



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Aditya Pharmacy College
SURAMPALEM-533 437



ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of

M. Biology

Name: Prasant Das

PIN No. 2334170024

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. PRASANT DAS

a student of 1st Pharm-D with Regd. No. 2334170024

in the 1st Pharm-D BIOLOGY Laboratory during the year 2023-2024

No. of Experiments Conducted 18

No. of Experiments Attended 18

Katlik.
Signature - Faculty Incharge
19/6/2024.

007
Signature-Head of the Department

Submitted for the practical examination held on SURAMPATEM



Katlik.
Examiner-1

PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPATEM-533 437

Katlik.
Examiner-2

Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	6/12/13	Introduction to Pharmacological Biology Practicals	01 to 07	<u>Katth</u>
2.	13/12/23	Study of compound microscope	08 to 14	<u>Katth</u>
3.	27/12/23	Study of Cell wall Constituents And cell Inclusions	15 to 23	<u>Katth</u>
4.	3/1/24	Study OF Different Modifications of Root	24 to 28	<u>Katth</u>
5.	29/1/24	Study of Different modification of Stem	29 to 32	<u>Katth</u>
6.	11/2/24	Study of different Modifications of Leaf	33 to 34	<u>Katth</u>
7.	8/2/24	Microscopic Study of Senna Leaf	35 to 38	<u>Katth</u>
8.	28/2/24	Internal Structure of Dicot Root	39 to 42	<u>Katth</u>
9.	6/3/24	Internal Structure of Monocot Root	43 to 46	<u>Katth</u>
10.	13/3/24	Internal Structure of Dicot Stem	47 to 50	<u>Katth</u>



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
11.	13/3/24	Transverse Section of a Monocot Stem	51 to 53	<u>Keethik</u>
12.	20/3/24	Microscopic Study of Cassia Cinnamon	54 to 56	<u>Keethik</u>
13.	27/03/24	Microscopic Study of Ephedra Stem	57 to 58	<u>Keethik</u>
14.	03/4/24	Microscopic Study of Podophyllum	59 to 60	<u>Keethik</u>
15.	17/4/24	Detailed Study of Rhog	61 to 65	<u>Keethik</u>
16.	29/4/24	Preparation of Permanent Slide	66-68	<u>Keethik</u>
17.	01/5/24	Simple Plant Physiological Experiment	69 to	<u>Keethik</u>
18.	8/5/24	Computer based tutorial	70 to 72	<u>Keethik</u>



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3. Detailed syllabus and lecture wise schedule :

Title of the topic

- 1 Introduction to the science of microbiology. Major divisions of microbial world and Relationship among them.
- 2 Different methods of classification of microbes and study of Bacteria, Fungi, virus, Rickettsiae, Spirochetes.
- 3 Nutritional requirements, growth and cultivation of bacteria and virus. Study of different important media required for the growth of aerobic and anaerobic bacteria & fungi. Differential media, enriched media and selective media, maintenance of lab cultures.
- 4 Different methods used in isolation and identification of bacteria with emphasis to different staining techniques and biochemical reactions. Counting of bacteria -Total and Viable counting techniques.
- 5 Detailed study of different methods of sterilization including their merits and demerits. Sterilization methods for all pharmaceutical products. Detailed study of sterility testing of different pharmaceutical preparations. Brief information on Validation.
- 6 Disinfectants- Study of disinfectants, antiseptics, fungicidal and virucidal agents- factors affecting their activation and mechanism of action. Evaluation of bactericidal, bacteristatic, virucidal activities, evaluation of preservatives in pharmaceutical preparations.
- 7 Immunology- Immunity. Definition, Classification, General principles of natural immunity. Phagocytosis, acquired immunity(active and passive). Antigens, chemical nature of antigens structure and formation of Antibodies, Antigen-Antibody reactions. Bacterial exotoxins and endotoxins. Significance of toxoids in active immunity. Immunization programme, and importance of booster dose.
- 8 Diagnostic tests : Schick's Test, Elisa test, Western Blot test, Southern Blot PCR Widai, QBC, Mantoux Peripheral smear. Study of malarial parasite.
- 9 Microbial culture sensitivity Testing: Interpretation of results Principles and methods of different microbiological assays, microbiological assay of Penicillin, Streptomycin and vitamin B₂ and B₁₂. Standardisation of vaccines and sera.
- 10 Study of infectious diseases: Typhoid, Tuberculosis, Malaria, Cholera, Hepatitis, Meningitis, Syphilis & Gonorrhea and HIV.

2.2 PHARMACEUTICAL MICROBIOLOGY (PRACTICAL)

Practical : 3 Hrs./Week

Title of the Experiment:

- 1 Study of apparatus used in experimental microbiology*.
- 2 Sterilisation of glass ware's. Preparation of media and sterilisation.*
- 3 Staining techniques – Simple staining. ; Gram's staining ; Negative staining**
- 4 Study of motility characters*.
- 5 Enumeration of micro-organisms (Total and Viable)*
- 6 Study of the methods of isolation of pure culture.*
- 7 Bio chemical testing for the identification of micro*-organisms.



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- 8 Cultural sensitivity testing for some micro-organisms.*
- 9 Sterility testing for powders and liquids.*
- 10 Determination of minimum inhibitory concentration.*
- 11 Microbiological assay of antibiotics by cup plate method.*
- 12 Microbiological assay of vitamins by Turbidometric method**
- 13 Determination of RWC.**
- 14 Diagnostic tests for some common diseases, Widal, malarial parasite.**

* Indicate minor experiment & ** indicate major experiment

Assignments:

- 1 Visit to some pathological laboratories & study the activities and equipment/instruments used and reporting the same.
2. Visit to milk dairies (Pasturization) and microbial laboratories (other sterilization methods) & study the activities and equipment/instruments used and reporting the same.
3. Library assignments.
 - a. Report of recent microbial techniques developed in diagnosing some common diseases.
 - b. Latest advancement developed in identifying, cultivating & handling of microorganisms.

Format of the assignment:

1. Minimum & Maximum number of pages.
2. It shall be computer draft copy.
3. Reference(s) shall be included at the end.
4. Name and signature of the student.
5. Assignment can be a combined presentation at the end of the academic year.
6. Time allocated for presentation may be 8+2 Min.

Scheme of Practical Examination:

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of Pharmaceutical Microbiology

Name: Amalakota Lalasa

PIN No. 223G1T0002

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. Amalakota Lalasa

a student of Pharm-D with Regd. No. 223G1T0002

*in the Pharmaceutical Microbiology
Laboratory during the year 2023-2024*

No. of Experiments Conducted 27

No. of Experiments Attended 26

G. Soujanya
Signature - Faculty incharge

Signature-Head of the Department

Aditya Pharmacy College

Submitted for the practical examination held on

H. Venkatesh
Examiner-1

G. Soujanya
Examiner-2



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.)	9-10-23	Introduction to microbiology	1 to 4	S
2.)	16-10-23	Common Laboratory rules & regulations for safety.	5 to 7	S
3.)	30-10-23	Study of apparatus used in pharmaceutical microbiology laboratory.	8 to 17	S
4.)	6-11-23	Preparation and sterilization of Nutrient Broth.	18 to 20	S
5.)	20-11-23	Preparation and sterilization of Nutrient Agar.	21 to 23	S
6.)	27-11-23	Culture transfer techniques.	24 to 27	S
7.)	4-12-23	Techniques for isolation of pure culture from mixed culture.	28 to 31	S
8.)	11-12-23	Preparation of Bacterial Smear.	32 to 33	S
9.)	18-12-23	Simple staining	34 to 36	S
10.)	8-1-24	Grams staining	37 to 38	S
11.)	22-1-24	Acid fast staining	39 to 40	S
12.)	29-1-24	IMUIC Test	41 to 45	S
13.)	5-2-24	Microscopic Examination of living bacteria by hanging drop method.	46 to 47	S
14.)	12-2-24	Sterilization by autoclave & test for sterility.	48 to 49	S
15.)	19-2-24	Sterilization by autoclave dry heat and test for sterility.	50 to 51	S



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
16)	26-2-24	Test for sterility of surgical dressing.	52 to 53	S
17)	4-3-24	Viable Count.	54 to 55	S
18)	11-3-24	Microbial assay of Amikacin by Cup plate method.	56 to 57	S
19)	18-3-24	Microbial assay of Terramycin by turbidometric method.	58 to 60	S
20)	1-4-24	ELISA	61 to 63	S
21)	8-4-24	Western blotting	64 to 67	S
22)	15-4-24	Vaccines and general requirements.	68 to 69	S
23)	22-4-24	Widal test.	70 to 72	S
24)	29-4-24	Diagnosis tests for determination of Malarial parasite.	73 to 80	S
25)	6-5-24	Gelatin liquefaction	81 to 82	S
26)	13-5-24	Starch hydrolysis	83 to 84	S
27)	20-5-24	Nitrate reduction test	85 to 87	S



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2.3 PHARMACOGNOSY & PHYTOPHARMACEUTICALS (PRACTICAL)

Practical : 3 Hrs./Week

General Requirements: Laboratory Napkin, Observation Book 150 pages Zero brush, Needle, Blade, Match box.

List of experiments:

- 1 Introduction of Pharmacognosy laboratory and experiments.
- 2 Study of cell wall constituents and cell inclusions.
- 3 Macro, powder and microscopic study of Datura.
- 4 Macro, powder and microscopic study of Senna.
- 5 Macro, powder and microscopic study of Cassia.cinnamon.
- 6 Macro, powder and microscopic study of Cinchona.
- 7 Macro, powder and microscopic study of Ephedra.
- 8 Macro, powder and microscopic study of Quassia.
- 9 Macro, powder and microscopic study of Clove
- 10 Macro, powder and microscopic study of Fennel.
- 11 Macro, powder and microscopic study of Coriander.
- 12 Macro, powder and microscopic study of Isapgol.
- 13 Macro, powder and microscopic study of Nux vomica.
- 14 Macro, powder and microscopic study of Rauwolfia.
- 15 Macro, powder and microscopic study of Liquorice.
- 16 Macro, powder and microscopic study of Ginger.
- 17 Macro, powder and microscopic study of Podophyllum.
- 18 Determination of Iodine value.
- 19 Determination of Saponification value and unsaponifiable matter.
- 20 Determination of ester value.
- 21 Determination of Acid value.
- 22 Chemical tests for Acacia.
- 23 Chemical tests for Tragacanth.
- 24 Chemical tests for Agar.
- 25 Chemical tests for Starch.
- 26 Chemical tests for Lipids.(castor oil,sesame oil, shark liver oil,bees wax)
- 27 Chemical tests for Gelatin.

Scheme of Practical Examination:

	Sessionals	Annual
Identification	04	10
Synopsis	04	10
Major Experiment	07	20
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance.



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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of

Pharmacognosy & phytopharmaceuticals

Name: N. Thansi

PIN No. 22361T0021

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. Naganabhylna Thansi

a student of II pharm.D. with Regd. No. 22361T0021

in the pharmacognosy Laboratory during the year 2023-2024

No. of Experiments Conducted 18

No. of Experiments Attended 17

Signature - Faculty incharge 10/06/2024

Signature-Head of the Department
Aditya Pharmacy College
SURAMPALM-533 437

Submitted for the practical examination held on



Signature H. H. Chatterjee
Examiner-1 27/6/24

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SURAMPALM-533 437

Signature 27/6/24
Examiner-2

Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	9/10/23	Study of compound Microscope	1-5	<i>P.</i> 17/1/23
2.	17/10/23	Macroscopy, Microscopy and powdered microscopic study of ferrel.	6-8	} <i>P.</i> 10/11/23
3.	24/11/23	Macroscopy, Microscopy & powdered microscopy of clove	9-12	
4.	10/11/23	Macroscopy, Microscopy and powdered microscopic study of cinnamon.	13-16	
5.	1/12/23	Macroscopy, Microscopy and powdered microscopic study of Datura.	17-20	} <i>P.</i> 1/12/23
6.	22/12/23	Macroscopy, Microscopy and powdered microscopic study of Senna	21-24	
7.	2/2/24	Macroscopy, Microscopy and powdered microscopic study of Ephedra	25-26	} <i>P.</i> 2/2/24
8.	9/2/24	Macroscopy, microscopy & powdered microscopic study of Quassia	27-29	
9.	9/2/24	Macroscopy, microscopy & powdered microscopic study of Nux-vomica	30-32	<i>P.</i> 9/2/24
10.	16/2/24	Macroscopy, Microscopy and powdered microscopic study of Rauwolfia	33-35	<i>P.</i> 22/5/24



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
110.	22/3/24	Determination of Soaponification value (s) saponification number of given oil	36-37	15/3/24
12.	22/3/24	Determination of Acid value of coconut oil	38-	
13.	15/3/24	chemical test for starch	39	5/4/24
14.	22/3/24	chemical test for Acacia	40-41	
15.	5/4/24	chemical test for Trogaranth	42-43	12/4/24
16.	12/4/24	Chemical test for Agar	44-45	
17.	19/4/24	Chemical test for Gelatin	46-47	23/5/24
18.	26/4/24	chemical test for lipids.	48-49	



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3. Detailed syllabus and lecture wise schedule :

Etiopathogenesis and pharmacotherapy of diseases associated with following systems/ diseases

Title of the topic

- 1 **Cardiovascular system:** Hypertension, Congestive cardiac failure, Angina Pectoris, Myocardial infarction, , Hyperlipidaemias , Electrophysiology of heart and Arrhythmias
- 2 **Respiratory system :** Introduction to Pulmonary function test, Asthma, Chronic obstructive airways disease, Drug induced pulmonary diseases
Endocrine system : Diabetes, Thyroid diseases, Oral contraceptives, Hormone replacement therapy, Osteoporosis
- 3 **General prescribing guidelines for**
 - a. Paediatric patients
 - b. Geriatric patients
 - c. Pregnancy and breast feeding
- 4 **Ophthalmology:** Glaucoma, Conjunctivitis- viral & bacterial
- 5 **Introduction to rational drug use**
Definition, Role of pharmacist Essential drug concept Rational drug formulations

2.6 PHARMACOTHERAPEUTICS - I (PRACTICAL)

Practical : 3 Hrs./Week

Practicals :

Hospital postings in various departments designed to complement the lectures by providing practical clinical discussion; attending ward rounds; follow up the progress and changes made in drug therapy in allotted patients; case presentation upon discharge. Students are required to maintain a record of cases presented and the same should be submitted at the end of the course for evaluation. A minimum of 20 cases should be presented and recorded covering most common diseases.

Assignments :

Students are required to submit written assignments on the topics given to them. Topics allotted should cover recent developments in drug therapy of various diseases. A minimum of THREE assignments [1500 – 2000 words] should be submitted for evaluation.



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Format of the assignment:

1. Minimum & Maximum number of pages.
2. Reference(s) shall be included at the end.
3. Assignment can be a combined presentation at the end of the academic year.
4. It shall be computer draft copy.
5. Name and signature of the student.
6. Time allocated for presentation may be 8+2 Min.

Scheme of Practical Examination:

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).




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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of PHARMACOTHERAPEUTICS-I

Name: CH.VEERA VENI

PIN No. 223G1T0031

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. CHAPPIDI VEERA VENI

a student of IInd PHARM-D with Regd. No. 223G1T0031

in the pharmaco- Laboratory during the year 2023-2024
therapeutics I

No. of Experiments Conducted 20

No. of Experiments Attended 20

Signature - Faculty incharge

Signature-Head of the Department

PRINCIPAL
Aditya Pharmacy College
SURAMPALAM-533 437

Submitted for the practical examination held on

Examiner-1

Examiner-2



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	7/11/23	Introduction to the soap format	1-3	}
2.	14/11/23	Renal Calculi with Hypertension & Diabetes	4-11	
3.	21/11/23	Nephrotic Syndrome	12-16	
4.	28/11/23	Polyarthritis	17-20	
5.	5/12/23	Cerebral Palsy with Refractory seizures	21-23	
6.	26/12/23	Thalassemia	24-25	}
7.	2/1/24	Bronchiolitis and respiratory distress	26-28	
8.	9/1/24	Juvenile Rheumatoid arthritis	29-32	
9.	10/1/24	Facial Nerve Palsy	33-37	}
10.	23/2/24	Colloid Goitre	38-41	
11.	30/2/24	Pneumonia	42-46	}
12.	6/2/24	Cerebrovascular Accident	47-50	
13.	13/2/24	Pulmonary Tuberculosis	51-54	
14.	20/2/24	Falciparum malaria	55-58	
15.	27/2/24	Diabetic ketoacidosis with seizures	59-62	}
16.	19/3/24	Toxic Epidermal Necrolysis	63-66	
17.	26/3/24	Thrombocytopenia	67-70	
18.	2/4/24	Inguinal Hernia	71-73	
19.	16/4/24	Parkinsonism	74-76	
20.	23/4/24	Chronic osteomyelitis	77-79	
21.	7/5/24	Proapsed Intervertebral Disc (PVD)	80-82	



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3.1 PHARMACOLOGY – II (PRACTICAL)

Practical : 3 Hrs./Week

List of Experiments:

1. Study of laboratory animals and their handling (a. Frogs, b. Mice, c. Rats, d. Guinea pigs, e. Rabbits).
2. Study of physiological salt solutions used in experimental pharmacology.
3. Study of laboratory appliances used in experimental pharmacology.
4. Study of use of anesthetics in laboratory animals.
5. To record the dose response curve of Ach using isolated ileum/rectus abdominis muscle preparation.
6. To carry out bioassay of Ach using isolated ileum/rectus abdominis muscle preparation by interpolation method.
7. To carry out bioassay of Ach using isolated ileum/rectus abdominis muscle preparation by three point method.
8. To record the dose response curve of Histamine using isolated guinea-pig ileum preparation.
9. Study of agonistic and antagonistic effects of drugs using isolated guinea-pig ileum preparation.
10. To carry out bioassay of Histamine using isolated guinea-pig ileum preparation by interpolation method.
11. To carry out bioassay of Histamine using guinea-pig ileum preparation by three point method.
12. To study the routes of administration of drugs in animals (Rats, Mice, Rabbits).
13. Study of theory, principle, procedure involved and interpretation of given results for the following experiments:
 - a) Analgesic property of drug using analgesiometer.
 - b) Antiinflammatory effect of drugs using rat-paw edema method.
 - c) Anticonvulsant activity of drugs using maximal electroshock and pentylene tetrazole methods.
 - d) Antidepressant activity of drugs using pole climbing apparatus and pentobarbitone induced sleeping time methods.
 - e) Locomotor activity evaluation of drugs using actophotometer and rotorod.
 - f) Cardiotonic activity of drugs using isolated frog heart and mammalian heart preparations.

Scheme of Practical Examination:

	Sessionals	Annual
Identification	02	10
Synopsis	04	10
Major Experiment (Bioassay)	08	30
Minor Experiment (Interpretation of given Graph or simulated experiment)	04	10
Viva	02	10
Max Marks	20	70
Duration	3hrs	4hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of
Pharmacology

Name: A. Sri Satya Shinney

PIN No. 213G1T0001

*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. A. Sri Satya Shinney

a student of III - Pharm.D with Regd. No. 213G1T0001

in the Pharmacology-II Laboratory during the year 2023-24

No. of Experiments Conducted 20

No. of Experiments Attended 20

Signature - Faculty incharge

Signature-Head of the Department

PRINCIPAL
Aditya Pharmacy College
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Submitted for the practical examination held on 08.15.24

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SURAMPALAM-533 437

Examiner-1

Examiner-2



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
	10/8/23	Introduction	1	
1.	17/8/23	Study of laboratory animals and their handling	2-6	Phe
2.	24/8/23	Study of physiological salt solution used in the pharmacological experiments	7-8	
3.	8/9/23	Study of Appliances used in experimental pharmacology	9-11	
4.	15/9/23	Study of use of anaesthetics in laboratory animals	12-15	Phe
5.	22/9/23	Dose response curve of Ach on frog rectus abdominus muscle	16-17	
6.	29/9/23	Inhibition of Ach by Lidocaine on chick ileum	18-19	
7.	5/10/23	Potentiation of Ach by Neostigmine on chick ileum	20-21	Phe
8.	26/10/23	BioAssay of Ach by using chick ileum by matching method	22	
9.	2/11/23	BioAssay of Ach by interpolation method using chick ileum	23-24	
10.	16/11/23	BioAssay of Ach by two point method using chick ileum	25-26	Phe
11.	23/11/23	BioAssay of Ach by three point method using chick ileum	27-28	
12.	30/11/23	Complete inhibition of Ach by pancuronium on chick ileum	29-30	
13.	7/12/23	Evaluation of muscle relaxant property of diazepam using apparatus	31-32	



Painter

S.No.	Date	Name of the Experiment	Page No.	Remarks
14.	21/12/23	Analgesic effect of paracetamol in Mice using eddy's hot plate method	33 - 34	ph
15.	4/1/24	Evaluation of CNS depressant property of chlorpromazine using actophotometer	35 - 36	
16.	11/2/24	Anti-inflammatory effect of drugs using rat paw edema method	37 - 39	
17.	15/2/24	Anticonvulsant activity of phenytoin against maximal electroshock induced convulsions	40 - 42	
18.	22/2/24	Anticonvulsant activity of diazepam against pentylenetetrazole induced clonic convulsions	43 - 44	Ph
19.	7/3/24	Study of different routes of drug administration	45 - 47	
20.	21/3/24	Cardiotonic activity of drugs using isolated frog heart preparation	48 - 50	



- **Fluorimetric Analysis:** Theory, luminescence, factors affecting fluorescence, quenching. Instrumentation, Applications, fluorescent indicators, study of pharmaceutically important compounds estimated by fluorimetry.
- b. **Flame Photometry:** Theory, nebulisation, flame and flame temperature, interferences, flame spectrometric techniques and instrumentation and pharmaceutical applications.
- c. **Atomic Absorption Spectrometry:** Introduction, Theory, types of electrodes, instrumentation and applications.
- d. **Atomic Emission Spectroscopy:** Spectroscopic sources, atomic emission spectrometers, photographic and photoelectric detection.
- e. **NMR & ESR (introduction only):** Introduction, theoretical aspects and applications.
- f. **Mass Spectroscopy: (Introduction only)** – Fragmentation, types of ions produced mass spectrum and applications.
- g. **Polarimetry: (Introduction only)** – Introduction to optical rotatory dispersion, circular dichroism, polarimeter.
- h. **X-RAY Diffraction: (Introduction only)** – Theory, reciprocal lattice concept, diffraction patterns and applications.
- i. **Thermal Analysis:** Introduction, instrumentation, applications, and DSC and DTA.

3.2 PHARMACEUTICAL ANALYSIS (PRACTICAL)

Practical : 3 Hrs./Week

List of Experiments:

1. Separation and identification of Amino Acids by Paper Chromatography.
2. Separation and identification of Sulpha drugs by TLC technique.
3. Effect of pH and solvent on the UV spectrum of given compound.
4. Comparison of the UV spectrum of a compound with that of its derivatives.
5. Determination of dissociation constant of indicators using UV-Visible spectroscopy.
6. Conductometric titration of mixture of acids with a strong base.
7. Potentiometric titration of an acid with a strong base.
8. Estimation of drugs by Fluorimetric technique.
9. Study of quenching effect in fluorimetry.
10. Colourimetric estimation of Sulpha drugs using BMR reagent.



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11. Simultaneous estimation of two drugs present in given formulation.
12. Assay of Salicylic Acid by colourimetry.
13. Determination of Chlorides and Sulphates in Calcium gluconate by Nepheloturbidimetric Method.
14. Determination of Na/K by Flame Photometry.
15. Determination of pKa using pH meter.
16. Determination of specific rotation.
17. Comparison of the IR spectrum of a compound with that of its derivatives.
18. Demonstration of HPLC.
19. Demonstration of HPTLC.
20. Demonstration of GC-MS.
21. Demonstration of DSC.
22. Interpretation of NMR spectra of any one compound.

Reference Books:

1. Text Book of Pharm. Analysis by Higuchi. T and Hasen. E. B., New York Inter Science Publishers.
2. Quantitative Pharma. Analysis by Jenkins, The Blakiston division, New York.
3. Quantitative Drug Analysis, by Garrot. D, Chapman & Hall Ltd., London.
4. Undergraduate Instrumental Analysis by James. E., CBS Publishers.
5. Instrumental Analysis by Willard and Merritt, EWP, East West Press Ltd., Delhi/Madras.
6. Pharm Analysis by Skoog and West, Sounders Manipal College Publishing.
7. Text Book of Chemical Analysis, by A.I.Vogel, ELBS with Macmillan press, Hampshire.
8. Textbook of Pharm. Analysis by K.A.Connors, John Wiley & Sons, New York, Brisbane, Singapore.
9. Textbook of Pharm. Analysis (Practical) by Beckett & Stenlake, CBS Publishers, Delhi.
10. Textbook of Drug Analysis by P.D. Sethi., CBS Publishers, Delhi.
11. Spectroscopy by Silverstein, John & Wiley & Sons. Inc., Canada & Singapore.
12. How to practise GMP-A Plan for total quality control by P.P. Sharma, Vandana Publications, Agra.
13. The Science & Practice of Pharmacy by Remington Vol-I & II, Mack Publishing Co. Pennsylvania.
14. TLC by Stahl, Spring Verlay.
15. Text Book of Pharm. Chemistry by Chatten, CBS Publications.
16. Spectroscopy by William Kemp, ELBS with Macmillan Press, Hampshire.
17. I.P.-1996, The Controller of Publications, New Delhi.
18. BPC- Dept. of Health, U.K. for HMSO.
19. USP - Mack Publishing Co., Easton, PA.
20. The Extra Pharmacopoeia – The Pharm. Press, London.



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ADITYA PHARMACY COLLEGE

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Department of Pharmaceutical Analysis

Name: B. Sri Krishna Veni

PIN No. 213G1T0003

*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. B. Sri Krishna Veni

a student of III-Pharm.D *with Regd. No.* 213G1T0003

in the Pharmaceutical Analysis *Laboratory during the year* 2023-24

No. of Experiments Conducted 25

No. of Experiments Attended 25

Signature - Faculty incharge

Signature - Head of the Department

Aditya Pharmacy College

SURAMPALAM-533 437

Submitted for the practical examination held on 09-05-24

Examiner-1

Examiner-2

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SURAMPALAM-533 437



Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	8/8/23	Introduction	1-4	(B) 22/8/23
1.	22/8/23	Identification of Amino acid by Ascending paper chromatography	5-8 At	(B) 29/08/23
2.	29/8/23	Identification of Amino acid by Radial paper chromatography	9-12 At	(B) 05/09/23
3.	5/9/23	Identification of metronidazole in a given sample Ascending paper chromatography	13-15 At	(B) 12/09/23
4.	12/9/23	Preparation of thin layer chromatographic plates	16-17 At	(B) 19/09/23
5.	19/9/23	Identification of Sulphonamide by thin-layered chromatography	18-19 At	(B) 26/09/23
16.	26/9/23	Introduction to UV Visible Spectroscopy	20-25	(B) 03/10/23
6.	26/9/23	Determination of absorption maxima of $KMnO_4$	26-27 At	(B) 3/10/23
7.	3/10/23	Estimation of salicylic acid by Calibration curve by colorimetry	28-29 At	(B) 10/10/23
8.	10/10/23	Assay of Paracetamol by using specific absorbance	30-31 At	(B) 10/10/23
9.	7/11/23	Assay of paracetamol by chemical derivatization method	32-34 At	(B) 14/11/23
10.	14/11/23	Assay of salicylic acid using direct comparison method	35-36 At	(B) 12/12/23

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Painter

S.No.	Date	Name of the Experiment	Page No.	Remarks
11.	21/11/23	Estimation of Sulphanilamide eye drops by colorimetry	37-39 At	B 12/12/2023
12.	28/11/23	Effect of PH absorption Spectrum of Sulpanilamide	40-41 At	B 12/12/2023
13.	12/12/23	Simultaneous estimation of caffeine & sodium benzoate using simultaneous equation method	42-43 At	B 26/12/2023
14.	19/12/23	Estimation of quinine sulphate by Fluorimetry	44-45 At	B 21/01/2024
15.	26/12/23	Determination of Nations in unknown sample by Flame photometry	46-47 At	B 21/01/2024
16.	21/1/24	Determination of K ⁺ ions in unknown sample by Flame photometry	48-49 At	B 09/02/2024
17.	9/1/24	Estimation of Sulphates by Nephelometry	50-53 At	B 09/02/2024
18.	23/1/24	Potentiometric titration of Strong acid with strong base	54-55 At	B 09/02/2024
19.	8/2/24	Determination of PK ^a of Aspirin by PH meter	56-57 At	B 20/02/2024
20.	13/2/24	Calibration of conductivity meter	58-60 At	B 05/03/2024
21.	20/2/24	Conductometric titration of Strong Acid vs Strong base	61-62 At	B 05/03/2024
22.	27/2/24	Column chromatography	63-64 At	B 12/03/2024
23.	5/3/24	Standard operating procedure for HPLC	65-67	B 26/03/2024
24.	12/3/24	Standard operating procedure for GAS chromatography	68-69	B 26/03/2024
25.	12/3/24	Interpretation of IR spectra 70-7		

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- 4 **Oncology:** Basic principles of Cancer therapy, General introduction to cancer chemotherapeutic agents, Chemotherapy of breast cancer, leukemia. Management of chemotherapy nausea and emesis
- 5 **Dermatology:** Psoriasis, Scabies, Eczema, Impetigo

3.3 PHARMACOTHERAPEUTICS – II (PRACTICAL)

Practical : 3 Hrs./Week

Practicals :

Hospital postings in various departments designed to complement the lectures by providing practical clinical discussion; attending ward rounds; follow up the progress and changes made in drug therapy in allotted patients; case presentation upon discharge. Students are required to maintain a record of cases presented and the same should be submitted at the end of the course for evaluation.

The student shall be trained to understand the principle and practice involved in selection of drug therapy including clinical discussion.

A minimum of 20 cases should be presented and recorded covering most common diseases.

Assignments :

Students are required to submit written assignments on the topics given to them. Topics allotted should cover recent developments in drug therapy of various diseases. A minimum of THREE assignments [1500 – 2000 words] should be submitted for evaluation.

Format of the assignment :

1. Minimum & Maximum number of pages.
2. Reference(s) shall be included at the end.
3. Assignment can be a combined presentation at the end of the academic year.
4. It shall be computer draft copy.
5. Name and signature of the student.
6. Time allocated for presentation may be 8+2 Min.

Scheme of Practical Examination :

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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SURAMPALAM-533 437



ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of PHARMACY PRACTICE

Name: Kavya

PIN No. 2136170014

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. Kavya Naga Praveena. J

a student of III Pharm D with Regd. No. 2136170014

in the Therapeutics Laboratory during the year 2023-24

No. of Experiments Conducted 20

No. of Experiments Attended 20

Signature - Faculty incharge

Signature-Head of the Department
PRINCIPAL

Aditya Pharmacy College

SURAMPALEM-533 437

Submitted for the practical examination held on 02/05/2024

Examiner-1

Examiner-2



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SURAMPALEM-533 437

Pointer







S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	25/8/23	A CASE STUDY ON DENGUE FEVER	1-5	
2.	14/9/23	A CASE STUDY ON HIV ASSOCIATED WITH CAD	6-9	
3.	21/9/23	A CASE STUDY ON INFECTIVE ENDOCARDITIS	10-12	
4.	5/10/23	A CASE STUDY ON ACUTE HEPATITIS WITH FEVER	13-17	
5.	12/10/23	A CASE STUDY ON ACUTE EXACERBATION OF COPD WITH TYPE-II DM	18-21	
6.	9/11/23	A CASE STUDY ON LEFT KNEE OSTEOARTHRITIS	22-24	
7.	16/11/23	A CASE STUDY ON ACUTE PANCREATITIS	25-28	
8.	23/11/23	A CASE STUDY ON DIABETIC KETOACIDOSIS, DM	29-34	
9.	7/12/23	A CASE STUDY ON COMMUNITY ACQUIRED PNEUMONIA, CABG/CAVR	35-39	
10.	14/12/23	A CASE STUDY ON CHRONIC LIVER DISEASE	40-43	
11.	28/12/23	A CASE STUDY ON CKD STAGE-II WITH UREMIA & METABOLIC ACIDOSIS, DEEP VEIN THROMBOSIS	44-48	
12.	11/01/24	A CASE STUDY ON SEPTIC SHOCK, AKI	49-52	
13.	25/01/24	A CASE STUDY ON CHOLELITHIASIS SICKLE CELL ANAEMIA	53-56	
14.	15/2/24	A CASE STUDY ON ACUTE	57-60	



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Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
		CORONARY SYNDROME, IAMI, MODERATE LV DYSFUNCTION		
15.	22/2/24	A CASE STUDY ON HYPONATREMIA, CAD, THYROID DYSFUNCTION	61-63	
16.	29/2/24	A CASE STUDY ON ACUTE NEPHROTIC SYNDROME	64-67	
17.	7/3/24	A CASE STUDY ON CHOLANGIO CARCINOMA	68-70	
18.	21/3/24	A CASE STUDY ON METASTATIC HODKIN'S LYMPHOMA	71-74	
19.	4/4/24	A CASE STUDY ON DM WITH ANEMIA	75-77	
20.	18/4/24	A CASE STUDY ON NORMAL PRESSURE HYDROCEPHALUS	78-80	



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3.5 MEDICINAL CHEMISTRY (PRACTICAL)

Practical : 3 Hrs./Week

1. Assays of important drugs from the course content.
2. Preparation of medicinally important compounds or intermediates required for synthesis of drugs.
3. Monograph analysis of important drugs.
4. Determination of partition coefficients, dissociation constants and molar refractivity of compounds for QSAR analysis.

Reference Books:

- a. Wilson and Gisvold's Text book of Organic, Medicinal and Pharmaceutical Chemistry, Lippincott-Raven Publishers-New York, Philadelphia.
- b. William.O.Foye, Principles of Medicinal Chemistry, B.I. Waverly Pvt. Ltd., New Delhi.
- c. Burgers, Medicinal Chemistry, M.E., Welly Med.Chemistry M.E. Walffed Johnwiley and Sons, Wiley-interscience Publication, New York, Toranto.
- d. A Text Book of Medicinal Chemistry Vol. I and II by Surendra N. Pandeya, S.G. Publisher, 6, Dildayal Nagar, Varanasi -10.
- e. Indian Pharmacopoeia 1985 and 1996. The Controller of Publications, Civil Lines, Delhi - 54.
- f. Current Index of Medical Specialities (CIMS) and MIMS India, MIMS, A.E. Morgan Publications (I) Pvt. Ltd, New Delhi-19.
- g. Organic Drug Synthesis-Ledniser Mitzsher Vol. I and II.
- h. Pharmaceutical Chemistry drug Synthesis Vol. I and II by H. J. Roth and A. Kleemann.
- i. The Science and Practice of Pharmacy Vol. 1 and 2, Remington, MACK Publishing Company, Easton, Pennsylvania.



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ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of Medicinal Chemistry

Name: Dona

PIN No. 21341T0009

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. A. Dona Satya Sriharsha

a student of III PharmD with Regd. No. 21341T0009

in the M. Chemistry Laboratory during the year 2023-24

No. of Experiments Conducted 21

No. of Experiments Attended 20

Signature - Faculty incharge

Signature-Head of the Department

PRINCIPAL
Aditya Pharmacy College
SURAMPALEM-533 437

Submitted for the practical examination held on

Examiner-1

Examiner-2



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SURAMPALEM-533 437

Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
1.	14/8/23	Preparation of Benzocaine	1-2	Si
2.	21/8/23	Preparation of 7-hydroxy, 4-methyl coumarin	3-4	Si
3.	28/8/23	Preparation of Benzimidazole	5-6	Si
4.	4/9/23	Preparation of Benzotriazole	7-8	Si
5.	11/9/23	Preparation of Fluorescein	9-10	Si
6.	18/9/23	Preparation of 5,5-diphenyl hydantoin	11-11	Si
7.	25/9/23	Preparation of 2,3-diphenyl quinoxaline	12-13	Si
8.	9/10/23	Preparation of Benzoic acid	14-15	Si
9.	6/11/23	Assay of Ascorbic Acid	16-17	Si
10.	20/11/23	Assay of Sulphanilamide	18-19	Si
11.	27/11/23	Assay of Benzocaine	20-21	Si
12.	4/12/23	Assay of Chloroquine Phosphate	22-23	Si
13.	11/12/23	Assay of Dapsone	24-26	Si
14.	18/12/23	Assay of Diclofenac sodium	27-28	Si
15.	8/1/24	Assay of Isoniazid	29-30	Si
16.	22/1/24	Assay of Metronidazole	31-32	Si
17.	12/2/24	Identification of Ascorbic Acid	33-34	Si
18.	19/2/24	Identification of Benzocaine	35-35	Si
19.	26/2/24	Identification of Isoniazid	36	Si
20.	4/3/24	Identification of Metronidazole	37	Si
21.	11/3/24	Identification of Sulphanilamide	38	Si
22.	1/4/24	QSAR Studies	39-44	Si



3.6 PHARMACEUTICAL FORMULATIONS (PRACTICAL)

Practical : 3 Hrs./Week

List of Experiments :

1. **Manufacture of Tablets**
 - a. Ordinary compressed tablet-wet granulation
 - b. Tablets prepared by direct compression.
 - c. Soluble tablet.
 - d. Chewable tablet.
2. **Formulation and filling of hard gelatin capsules**
3. **Manufacture of parenterals**
 - a. Ascorbic acid injection
 - b. Calcium gluconate injection
 - c. Sodium chloride infusion.
 - d. Dextrose and Sodium chloride injection/ infusion.
4. **Evaluation of Pharmaceutical formulations (QC tests)**
 - a. Tablets
 - b. Capsules
 - c. Injections
5. **Formulation of two liquid oral preparations and evaluation by assay**
 - a. Solution: Paracetamol Syrup
 - b. Antacid suspensions- Aluminum hydroxide gel
6. **Formulation of semisolids and evaluation by assay**
 - a. Salicylic acid and benzoic acid ointment
 - b. Gel formulation Diclofenac gel
7. **Cosmetic preparations**
 - a. Lipsticks
 - b. Cold cream and vanishing cream
 - c. Clear liquid shampoo
 - d. Tooth paste and tooth powders.
8. **Tablet coating (demonstration)**

Scheme of Practical Examination :

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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Aditya Pharmacy College
SURAMPALAM-533 437



ADITYA PHARMACY COLLEGE

ADB Road, Surampalem. Kakinada.Dist., (A.P.)

Department of PHARMACEUTICAL FORMULATIONS

Name: J. Kavya

PIN No. 21361T0014

*Certified that this is the bonafide record of
practical work done by*

Mr./Ms. Kavya Naga Praveena. Jakka

a student of III Pharm D with Regd. No. 21361T0014

in the Pharm. Formulation Laboratory during the year 2023 - 24

No. of Experiments Conducted 20

No. of Experiments Attended 18

Signature - Faculty Incharge

Signature-Head of the Department

PRINCIPAL
Aditya Pharmacy College

Submitted for the practical examination held on SURAMPALEM-533 437

E. Usharani
Examiner-1

[Signature]
Examiner-2



PRINCIPAL
ADITYA PHARMACY COLLEGE(A)
SURAMPALEM-533 437

Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
	19/8/23	Introduction	1-4	(R)
1.	26/8/23	Formulation of paracetamol tablets by wet granulation Method.	5-7	(R)
2.	2/9/23	Evaluate the formulated paracetamol tablets.	8-11	(R)
3.	16/9/23	Formulation of Diclofenac sodium tablets by direct compression Method	12-13	(R)
4.	30/9/23	Formulation of soluble Acetyl salicylic acid tablets	14-15	(R)
5.	30/9/23	Formulation of chewable laxative tablets.	16-17	(R)
6.	14/10/23	Formulation and filling of Hard gelatin capsules	18-20	(R)
		Introduction	21-22	(R)
7.	14/10/23	Formulation of Ascorbic acid Injection	23-25	(R)
8.	16/10/23	Formulation of calcium gluconate injection	26	(R)
9.	11/11/23	Formulation of sodium chloride injection	27	(R)
10.	18/11/23	Formulation of Dextrose and sodium chloride infusion	28	(R)
11.	9/12/23	Evaluation of paracetamol syrup and Assay	29-32	(R)
12.	16/12/23	Preparation of cold cream	33	(R)
13.	16/12/23	Preparation of vanishing cream	34	(R)
14.	23/12/23	Preparation of Tooth powder	35	(R)



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SURAMPALAM-533 437

Pointer

S.No.	Date	Name of the Experiment	Page No.	Remarks
15.	28/12/23	Preparation of liquid shampoo	36 - 37	Ⓚ
16.	6/1/24	Formulation of Aluminium hydroxide gel Antacid suspension	38 - 40	Ⓚ
17.	27/1/24	Preparation of lipstick	41 - 43	Ⓚ
18.	17/2/24	Formulation of salicylic acid and benzoic acid ointment	44 - 45	Ⓚ
19.	24/2/24	Formulation of Diclofenac sodium gel and evaluation by Assay	46 - 49	Ⓚ
20.	24/2/24	Preparation of tooth paste	50 - 51	Ⓚ



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SURAMPALEM-533 437

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4.1 PHARMACOTHERAPEUTICS – III (PRACTICAL)

Practical : 3 Hrs./Week

Practicals:

Hospital postings for a period of at least 50 hours is required to understand the principles and practice involved in ward round participation and clinical discussion on selection of drug therapy. Students are required to maintain a record of 15 cases observed in the ward and the same should be submitted at the end of the course for evaluation. Each student should present at least two medical cases they have observed and followed in the wards.

Etiopathogenesis and pharmacotherapy of diseases associated with following systems/ diseases:

Title of the topic

- 1 **Gastrointestinal system:** Peptic ulcer disease, Gastro Esophageal Reflux Disease, Inflammatory bowel disease, Liver disorders - Alcoholic liver disease, Viral hepatitis including jaundice, and Drug induced liver disorders.
- 2 **Haematological system:** Anaemias, Venous thromboembolism, Drug induced blood disorders.
- 3 **Nervous system:** Epilepsy, Parkinsonism, Stroke, Alzheimer's disease,
- 4 **Psychiatry disorders:** Schizophrenia, Affective disorders, Anxiety disorders, Sleep disorders, Obsessive Compulsive disorders
- 5 Pain management including Pain pathways, neuralgias, headaches.
- 6 Evidence Based Medicine

Assignments:

Students are required to submit written assignments on the topics given to them. Topics allotted should cover recent developments in drug therapy of various diseases. A minimum of THREE assignments [1500 – 2000 words] should be submitted for evaluation.

Format of the assignment:

1. Minimum & Maximum number of pages
2. Reference(s) shall be included at the end.
3. Assignment can be a combined presentation at the end of the academic year
4. It shall be computer draft copy
5. Name and signature of the student
6. Time allocated for presentation may be 8+2 Min.

Scheme of Practical Examination :

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



Handwritten signature in green ink.

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SURAMPALM-533 437



ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.



DEPARTMENT OF

Pharmaco therapeutics - III



Name B. Mounika

PIN No.

2	0	3	6	1	T	0	0	0	3
---	---	---	---	---	---	---	---	---	---

*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. B. Mounika

a student of IV Pharm D with Regd. No. 20361T0003

in the ... Pharmaco therapeutics-3 Laboratory during the year ... 2023-2024 ...

No. of Experiments Conducted

18

No. of Experiments Attended

18

Signature - Faculty incharge

Signature - Head of the Department

PRINCIPAL
Aditya Pharmacy College

SURAMPATEM-533 437
08/05/24

Submitted for the Practical examination held on

EXAMINER-1

EXAMINER-2



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SURAMPATEM-533 437

POINTER

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115

ADITYA PHARMACY COLLEGE(A,
SURAMPALEM-533 437

WIKAS-NLR.

5 Hospital pharmacy services

- a) Procurement & warehousing of drugs and Pharmaceuticals
- b) Inventory control
Definition, various methods of Inventory Control
ABC, VED, EOQ, Lead time, safety stock
- c) Drug distribution in the hospital
 - i) Individual prescription method
 - ii) Floor stock method
 - iii) Unit dose drug distribution method
- d) Distribution of Narcotic and other controlled substances
- e) Central sterile supply services – Role of pharmacist

6 Manufacture of Pharmaceutical preparations

- a) Sterile formulations – large and small volume parenterals
- b) Manufacture of Ointments, Liquids, and creams
- c) Manufacturing of Tablets, granules, capsules, and powders
- d) Total parenteral nutrition

7 Continuing professional development programs

Education and training

8 Radio Pharmaceuticals – Handling and packaging**9 Professional Relations and practices of hospital pharmacist****4.2 HOSPITAL PHARMACY (PRACTICAL)**

Practical : 3 Hrs./Week

1. Assessment of drug interactions in the given prescriptions
2. Manufacture of parenteral formulations, powders.
3. Drug information queries.
4. Inventory control

List of Assignments:

1. Design and Management of Hospital pharmacy department for a 300 bedded hospital.
2. Pharmacy and Therapeutics committee – Organization, functions, and limitations.
3. Development of a hospital formulary for 300 bedded teaching hospital
4. Preparation of ABC analysis of drugs sold in one month from the pharmacy.
5. Different phases of clinical trials with elements to be evaluated.
6. Various sources of drug information and systematic approach to provide unbiased drug information.
7. Evaluation of prescriptions generated in hospital for drug interactions and find out the suitable management.



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SURAMPALAM-533 437

Special requirements:

1. Each college should sign MoU with nearby local hospital having minimum 150 beds for providing necessary training to the students' on hospital pharmacy activities.
2. Well equipped with various resources of drug information.

Scheme of Practical Examination:

	Sessionals	Annual
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
Max Marks	20	70
Duration	03hrs	04hrs

Note : Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance).



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SURAMPALEM-533 437

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ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.



DEPARTMENT OF



Name BOMMETI SARA AISWARYA PIN No. 203G1T0002

*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. Bommeti Sara Aiswarya

a student of IV Pharm D with Regd. No. 203G1T0002

in the Hospital Pharmacy Laboratory during the year 2023-2024

No. of Experiments Conducted 20


No. of Experiments Attended 20

P. Lakshmi
Signature - Faculty Incharge

009
Signature - Head of the Department
PRINCIPAL

Aditya Pharmacy College
09/05/2024
533 437

Submitted for the Practical examination held on SURAMPAL

P. Lakshmi
EXAMINER-1


K. Pushra Lakshmi
EXAMINER-2

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SURAMPAL-533 437

POINTER

S.No.	Date	Name of the Experiment	Page No.	Remarks
-------	------	------------------------	----------	---------

1.	28/6/23	Introduction	01-03	} RK
2.	5/7/23	Drug Profile - 1	04-06	
3.	12/7/23	Drug profile - 2	07-09	
4.	19/7/23	Introduction to Parenterals	10-12	} RK
5.	26/7/23	Sodium chloride Injection	13-13	
6.	2/8/23	Dextrose and sodium chloride Infusion	14	
7.	9/8/23	Introduction to powders	15-17	} RK
8.	16/8/23	Oral Rehydration salts	18	
9.	23/8/23	Medicated Gusting powder	19-20	
10.	6/9/23	Introduction to Drug Information Query	21-24	} RK
11.	20/9/23	Drug Information Query	25-27	
12.	4/10/23	Introduction to Drug Interactions	28-32	
13.	18/10/23	Drug Interaction Case study - I	33-34	} RK
14.	1/11/23	Inventory control	35-39	
15.	15/11/23	Inventory case study - I	40	
16.	29/11/23	Inventory case study - II	41-42	} RK
17.	27/12/23	Inventory case study - III	43-44	
18.	10/1/24	Drug profile - 3	45-47	
19.	31/1/24	Drug Information Query - II	48-50	
20.	7/2/24	Drug Interaction Case study - II	51-52	



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SURAMPALAM-533 437

3. **Patient data analysis**
The patient's case history, its structure and use in evaluation of drug therapy & Understanding common medical abbreviations and terminologies used in clinical practices.
4. **Clinical laboratory tests used in the evaluation of disease states, and interpretation of test results**
 - a. Haematological, Liver function, Renal function, thyroid function tests
 - b. Tests associated with cardiac disorders
 - c. Fluid and electrolyte balance
 - d. Microbiological culture sensitivity tests
 - e. Pulmonary Function Tests
5. **Drug & Poison information**
 - a. Introduction to drug information resources available
 - b. Systematic approach in answering DI queries
 - c. Critical evaluation of drug information and literature
 - d. Preparation of written and verbal reports
 - e. Establishing a Drug Information Centre
 - f. Poisons information- organization & information resources
6. **Pharmacovigilance**
 - a. Scope, definition and aims of pharmacovigilance
 - b. Adverse drug reactions - Classification, mechanism, predisposing factors, causality assessment [different scales used]
 - c. Reporting, evaluation, monitoring, preventing & management of ADRs
 - d. Role of pharmacist in management of ADR.
7. Communication skills, including patient counselling techniques, medication history interview, presentation of cases.
8. Pharmaceutical care concepts
9. Critical evaluation of biomedical literature
10. Medication errors

4.3 CLINICAL PHARMACY (PRACTICAL)

Practical : 3 Hrs./Week

Students are expected to perform 15 practicals in the following areas covering the topics dealt in theory class.

- a. Answering drug information questions (4 Nos)
- b. Patient medication counselling (4 Nos)
- c. Case studies related to laboratory investigations (4 Nos)
- d. Patient medication history interview (3 Nos)



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SURAMPALAM-533 437

Assignment:

Students are expected to submit THREE written assignments (1500 – 2000 words) on the topics given to them covering the following areas dealt in theory class.

Drug information, Patient medication history interview, Patient medication counselling, Critical appraisal of recently published articles in the biomedical literature which deals with a drug or therapeutic issue.

Format of the assignment:

1. Minimum & Maximum number of pages.
2. Reference(s) shall be included at the end.
3. Assignment can be a combined presentation at the end of the academic year.
4. It shall be computer draft copy.
5. Name and signature of the student.
6. Time allocated for presentation may be 8+2 Min.



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SURAMPALEM-533 437



ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.

DEPARTMENT OF
Clinical Pharmacy

Name Mounika B PIN No. 203G1T0003

*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. Budati Mounika

a student of IV Pharm D with Regd. No. 203G1T0003

in the Clinical pharmacy Laboratory during the year 2023-24

No. of Experiments Conducted 16

No. of Experiments Attended 13

Signature - Faculty incharge

Signature - Head of the Department

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Aditya Pharmacy College

Submitted for the Practical examination held on 10-5-24 SURAMPALEM-533 437

EXAMINER-1

EXAMINER-2



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POINTER

S.No.	Date	Name of the Experiment	Page No.	Remarks
	21/7/23	Introduction to Drug information queries	1-4	Nandideepika
1)	28/7/23	Drug information query - 1	5-7	
2)	04/8/23	Drug information query - 2	8-9	
3)	18/8/23	Drug information query - 3	10-11	
4)	25/8/23	Drug information query - 4	12-13	
5)	22/9/23	Patient counselling - 1	14-17	
6)	29/9/23	Patient counselling - 2	18-20	
7)	13/10/23	Patient counselling - 3	21-23	
8)	03/11/23	Patient counselling - 4	24-26	
	17/12/23	Introduction to medication history interview	27-30	
9)	29/12/23	Patient medication history interview - 1	31	
10)	5/1/24	Patient medication history interview - 2	32	
11)	2/2/24	Patient medication history interview - 3	33	
12)	9/2/24	Patient medication history interview - 4	34	
	16/2/24	Introduction to Laboratory Data interpretations	35-39	
13)	23/2/24	Laboratory Data interpretations - 1	40-41	
14)	1/3/24	Laboratory Data interpretations - 2	42-43	
15)	15/3/24	Laboratory Data interpretations - 3	44-45	
16)	22/3/24	Laboratory Data interpretations - 4	46-47	



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WIKAS-NLR

4.5 BIOPHARMACEUTICS AND PHARMACOKINETICS (PRACTICAL)

Practical : 3 Hrs./Week

1. Improvement of dissolution characteristics of slightly soluble drugs by some methods.
2. Comparison of dissolution studies of two different marketed products of same drug.
3. Influence of polymorphism on solubility and dissolution.
4. Protein binding studies of a highly protein bound drug and poorly protein bound drug.
5. Extent of plasma-protein binding studies on the same drug (i.e. highly and poorly protein bound drug) at different concentrations in respect of constant time.
6. Bioavailability studies of some commonly used drugs on animal/human model.
7. Calculation of K_a , K_e , $t_{1/2}$, C_{max} , AUC, AUMC, MRT etc. from blood profile data.
8. Calculation of bioavailability from urinary excretion data for two drugs.
9. Calculation of AUC and bioequivalence from the given data for two drugs.
10. In vitro absorption studies.
11. Bioequivalency studies on the different drugs marketed.(eg) Tetracycline, Sulphamethoxazole, Trimethoprim, Aspirin etc., on animals and human volunteers.
12. Absorption studies in animal inverted intestine using various drugs.
13. Effect on contact time on the plasma protein binding of drugs.
14. Studying metabolic pathways for different drugs based on elimination kinetics data.
15. Calculation of elimination half-life for different drugs by using urinary elimination data and blood level data.
16. Determination of renal clearance.

References:

- a. Biopharmaceutics and Clinical Pharmacokinetics by, Milo Gibaldi
- b. Remington's Pharmaceutical Sciences, By Mack Publishing Company, Pennsylvania.
- c. Pharmacokinetics: By Milo Gibaldi Donald, R. Mercel Dekker Inc.
- d. Hand Book of Clinical Pharmacokinetics, By Milo Gibaldi and Laurie Prescott by ADIS Health Science Press.
- e. Biopharmaceutics and Pharmacokinetics; By Robert F Notari
- f. Biopharmaceutics; By Swarbrick
- g. Bio pharmaceutics and Pharmacokinetics-A Treatise, By D. M. Brahmarkar and Sunil B.Jaiswal, Vallabh Prakashan Pitampura, Delhi
- h. Clinical Pharmacokinetics, Concepts and Applications: By Malcolm Rowland and Thomas, N. Tozen, Lea and Febrger, Philadelphia, 1995.
- i. Dissolution, Bioavailability and Bioequivalence, By Abdou H.M, Mack, Publishing Company, Pennsylvania 1989.
- j. Biopharmaceutics and Clinical Pharmacokinetics-An introduction 4th edition Revised and expanded by Robert F Notari Marcel Dekker Inc, New York and Basel, 1987.
- k. Encyclopedia of Pharmaceutical Technology, Vol 13, James Swarbrick, James, C. Royle, Marcel Dekker Inc, New York 1996.



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ADITYA PHARMACY COLLEGE

ADB ROAD, SURAMPALEM, E.G. Dist.



DEPARTMENT OF

Biopharmaceutics and pharmacokinetics



Name *P. Shiny* PIN No.

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*Certified that this is the bonafide record of
practical work done by*

Mr. / Ms. *P. Shiny*

a student of *IV Pharm-D* with Regd. No. *203.G.1.TU.012*

in the *B.P.P.K. - Lab* Laboratory during the year *2023-2024*

No. of Experiments Conducted

17

No. of Experiments Attended

16

G. Sankar, 21/2/24
Signature - Faculty incharge

[Signature]
Signature - Head of the Department

Aditya Pharmacy College

SURAMPALEM-533 437

Submitted for the Practical examination held on *11-05-2024*

E. Usharani
EXAMINER-1

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SURAMPALEM-533 437

[Signature]
EXAMINER-2



POINTER

S.No.	Date	Name of the Experiment	Page No.	Remarks
	6/6/23	Introduction	1-3	8/6/23
1.	13/6/23	Evaluation of dissolution rate of commercial brands of paracetamol tablets as per IP/BP/USP.	4-80	8/11/23
2.	20/6/23	Effect of Binder on dissolution of paracetamol.	9-12	8/25/23
3.	11/7/23	Effect of Diluent on dissolution rate of paracetamol tablets.	13-17	8/1/23
4.	25/7/23	Effect of Super disintegrants on dissolution rate of paracetamol.	18-21	8/1/23
5.	1/8/23	Evaluation of hypothetical dissolution of 2 brands of PCM	22-24	8/8/23
6.	8/8/23	Evaluation of different brands of the sustain released diclofenac sodium tablets.	25-29	8/19/23
7.	19/9/23	Effect of solubility enhancer on dissolution rate of paracetamol	30-33	8/26/23
8.	26/9/23	Study of protein Binding of alimesulide using a semi-permeable membrane.	34-37	8/31/23
	31/10/23	Introduction to pharmacokinetics	38-39	8/7/10/23
9.	17/10/23	Estimation of different pharmacokinetic parameters from given one compartment model IV Bolus data	40-48	8/24/10/23
10.	24/10/23	Estimation of pharmacokinetic parameters.	44	8/31/10/23

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S.No.	Date	Name of the Experiment	Page No.	Remarks
11.	31/10/23	Determination of Mean Residence Time	45-46	B 7/11/23
12.	7/11/23	Analysis of pharmacokinetic data after extravascular administration [one-compartment model].	47-51	B 9/11/24
13.	28/11/23	Determination of Absorption Rate constant by Wagner Nelson method.	52-54	B 23/1/24
14.	9/01/24	Determination of Elimination rate constant by Rate excretion method.	55-57	B 30/1/24
15.	23/1/24	Estimation of pharmacokinetic parameters of one compartment model using data by sigma-minus method	58-64	B 30/1/24
16.	30/1/24	Determination of Renal clearance of Riboflavin by using urinary excretion data.	65-68	B 6/2/24
17.	6/2/24	Determination of Renal clearance of Ascorbic acid by using Sigma Minus method.	69-71	B 24/2/24

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