1.3.2 average percentage of courses that include experimental learning through projectwork, internship and field work for the year 2022-23

S.NO	SUBJECT CODE	SUBJECT NAME
1	BP809ET	Cosmetic Science(Theory)
2	BP604T	Biopharrmaceutics And Pharmacokinetics (Theory)
3	BP603T	Herbal Drug Technology (Theory)
4	BP402T	Medicinal Chemistry-I (Theory)
5	BP203T	Biochemistry (Theory)
6	BP601T	Medicinal Chemistry-III (Theory)
7	BP609P	Herbal Drug Technology (Practical)
8	BP507P	Pharmacology -II (Practical)
9	BP704T	Novel Drug Delivery Systems (Theory)
10	BP702T	Industrial Pharmacy-II (Theory)
11	BP505T	Pharmaceutical Jurisprudence (Theory)
12	BP502T	Industrial Pharmacy-I (Theory)
13	BP307P	Pharmaceutical Microbiology (Practical)
14	BP403T	Physical Pharmaceutics -II (Theory)
15	BP405T	Pharmacognosy And Phytochemistry -I (Theory)
16	BP304T	Pharmaceutical Engineering (Theory)
17	BP606T	Pharmaceutical Quality Assurance (Theory)
18	BP303T	Pharmaceutical Microbiology (Theory)
19	BP504T	Pharmacognosy And Phytochemistry -II (Theory)
20	BP409P	Pharmacognosy And Phytochemistyry -I (Practical)
21	BP302T	Physical Pharmaceutics-I (Theory)

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22	BP103T	Pharmaceutics -I (Theory)
23	BP811ET	Advanced Instrumentation Techniques (Theory)
24	BP102T	Pharmaceutical Analysis (Theory)
25	BP301T	Pharmaceutical Organic Chemistry -II (Theory)
26	BP701T	Instrumental Methods Of Analysis (Theory)
27	BP703T	Pharmacy Practice (Theory)
28	BP605T	Pharmaceutical Biotechnology (Theory)
29	BP107P	Human Anatomy And Physiology I (Practical)
30	BP108P	Pharmaceutical Analysis (Practical)
31	BP109P	Pharmaceutics -I (Practical)
32	BP110P	Pharmaceutical Inorganic Chemistry (Practical)
33	BP207P	Human Anatomy And Physiology II (Practical)
34	BP208P	Pharmaceutical Organic Chemistry –I (Practical)
35	BP209P	Biochemistry (Practical)
36	BP210P	Computer Applications in Pharmacy (Practical)
37	BP305P	Pharmaceutical Organic Chemistry -II (Practical)
38	BP306P	Physical Pharmaceutics -I (Practical)
39	BP308	Pharmaceutical Engineering (Practical)
40	BP406P	Medicinal Chemistry -I (Practical)
41	BP408P	Pharmacology -I (Practical)
42	BP506P	Industrial Pharmacy -I (Practical)
43	BP508P	Pharmacognosy And Phytochemistry -II (Practical)
44	BP607P	Medicinal Chemistry -III (Practical)
45	BP608P	Pharmacology -III (Practical)

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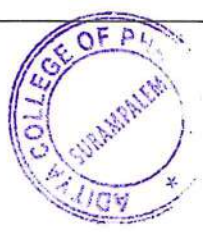
46	BP705P	Instrumental Methods Of Analysis (Practical)
47	MPH105PB	Pharmaceutics (Practical) –II
48	MPL102T	Advanced Pharmacology (Theory)-I
49	MPL103T	Pharmacological And Toxicological Screening Methods -I (Theory)
50	MPL105PB	Pharmacology Practical –II
51	MPL202T	Pharmacological And Toxicological Screening Methods -II (Theory)
52	MPL205PA	Pharmacology Practical –III
53	MPL104PA	Pharmacology Practical –I
54	MPL206PB	Pharmacology Practical –IV
55	T4104	Biostat and Research Methodology (Theory)
56	T2106	Pharmacotherapeutics-I (Theory)
57	T2101	Pathophysiology (Theory)
58	T2105	Community Pharmacy (Theory)
59	T1108	Human Anatomy And Physiology (Practical)
60	T1109	Pharmaceutics (Practical)
61	T110A	Medicinal Biochemistry(Practical)
62	T110B	Pharmaceutical Organic Chemistry(Practical)
63	T110C	Pharmaceutical Inorganic Chemistry (Practical)
64	T110D	Remedial Biology (Practical)
65	T2107	Pharmaceutical Microbiology (Practical)
66	T2108	Pharmacognosy And PhytoPharmaceuticals (Practical)
67	T3107	Pharmacology II(Practical)
68	T3108	Pharmaceutical Analysis (Practical)
69	T3109	Pharmacotherapeutics-II (Practical)



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70	T3110	Medicinal Chemistry (Practical)
71	T3111	Pharmaceutical Formulations (Practical)
72	T4107	Pharmacotherapeutics -III (Practical)
73	T4108	Hospital Pharmacy (Practical)
74	T4109	Clinical Pharmacy (Practical)
75	T4110	Biopharmaceutics And Pharmacokinetics (Practical)

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BP809ET. COSMETIC SCIENCE(Theory)

45Hours

UNIT I

10Hours

Classification of cosmetic and cosmeceutical products

Cosmetic excipients: Surfactants, rheology modifiers, humectants, emollients, preservatives. Classification and application

Skin: Basic structure and function of skin.

Hair: Basic structure of hair. Hair growth cycle.

Oral Cavity: Common problem associated with teeth and gums.

UNIT II

10 Hours

Principles of formulation and building blocks of skin care products:

Face wash,

Moisturizing cream, Cold Cream, Vanishing cream their relative skin sensory, advantages and disadvantages.Application of these products in formulation of cosmecuticals.

Principles of formulation and building blocks of Hair care products:

Conditioning shampoo, Hair conditioners,antidandruff shampoo.

Hair oils.

Chemistry and formulation of Para-phylene diamine based hair dye.

Principles of formulation and building blocks of oral care products:

Toothpaste for bleeding gums, sensitive teeth, Teeth whitening, Mouthwash.

UNIT III

10 Hours

Sun protection, Classification of Sunscreens and SPF.

Role of herbs in cosmetics:

Skin Care: Aloe and turmeric

Hair care: Henna and amla.

Oral care: Neem and clove

Analytical cosmetics: BIS specification and analytical methods for shampoo, skin-cream and toothpaste.

UNIT IV

08 Hours

Definition of cosmetics as per Indian and EU regulations, Evolution of cosmeceuticals from cosmetics, cosmetics as quasi and OTC drugs.

Principles of Cosmetic Evaluation:Principles of sebumeter, corneometer. Measurement of TEWL, Skin Color, Hair tensile strength, Hair combing properties

Soaps,and syndet bars. Evolution and skin benefits.

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UNIT V **07 Hours**

Oily and dry skin, causes leading to dry skin, skin moisturisation. Basic understanding of the terms Comedogenic, dermatitis.

Cosmetic problems associated with Hair and scalp: Dandruff, Hair fall causes

Cosmetic problems associated with skin: blemishes, wrinkles, acne, prickly heat and body odor.

Antiperspirants and Deodorants- Actives and mechanism of action

References

1) Harry's Cosmeticology, Wilkinson, Moore, Seventh Edition, George Godwin.
2) Cosmetics – Formulations, Manufacturing and Quality Control, P.P. Sharma, 4th Edition, Vandana Publications Pvt. Ltd., Delhi.

FORMULATION AND EVALUATION OF SERTRALINE HYDROCHLORIDE MICROSPHERES EMBEDDED IN TRANSDERMAL FILM

Dissertation submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY,

KAKINADA

In the partial fulfillment of the requirements for the award of the degree of

BACHELOR OF PHARMACY

C.H. NAGAVENI (183H1R0070)

B. PAVANI (193H1R0003)

A. NALINI (193H1R0001)

B. SUDHEER (193H1R0004)

A. HEMA (193H1R0002)

UNDER THE GUIDANCE OF

K. VENKATESWARLU

M. PHARM, (Ph.D.)

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CERTIFICATE

This is to certify that the investigation described in this thesis entitled "Formulation and evaluation of sertraline hydrochloride microspheres embedded in transdermal film" was submitted by C.H. NAGA VENI (193H1R0003), A. NALINI (193H1R0001), A. HEMA (193H1R0002), B. PAVANI (193H1R0005), B. SUDHEER (193H1R0004) of Aditya College of Pharmacy (Affiliated to JNTU Kakinada) for the partial fulfilment of Degree of Bachelor of Pharmacy in the Department of pharmaceutics. The report embedded in this thesis was carried out under the Guidance of Mr. K. VENKATESWARLU M. PHARM, (Ph.D.) Associate professor, Dept. of pharmaceutics in Aditya College of Pharmacy, Surampalem.

Principal,
Dr. K. Ravi Shankar
M Pharm., PhD.
Aditya College of pharmacy
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EXTERNAL EXAMINER

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INTERNAL EXAMINER

BP 604 T. BIOPHARMACEUTICS AND PHARMACOKINETICS (Theory)

45 Hours

Scope: This subject 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 the course student shall be able to:

1. Understand the basic concepts in biopharmaceutics and pharmacokinetics.
2. Use plasma data and derive the pharmacokinetic parameters to describe the process of drug absorption, distribution, metabolism and elimination.
3. Critically evaluate biopharmaceutic studies involving drug product equivalency
4. Design and evaluate dosage regimens of the drugs using pharmacokinetic and biopharmaceutic parameters.
5. detect potential clinical pharmacokinetic problems and apply basic pharmacokinetic principles to solve them

Course Content:

UNIT-I **10 Hours**

Introduction to Biopharmaceutics

Absorption; Mechanisms of drug absorption through GIT, factors influencing drug absorption though GIT, absorption of drug from Non per oral extra-vascular routes, Distribution of drugs Tissue permeability of drugs, binding of drugs, apparent, volume of drug distribution, protein binding of drugs, factors affecting protein-drug binding. Kinetics of protein binding, Clinical significance of protein binding of drugs

UNIT- II **10 Hours**

Drug Elimination renal excretion of drugs, factors affecting renal excretion of drugs, renal clearance, Non renal routes of drug excretion of drugs

Bioavailability and Bioequivalence: Objectives of bioavailability studies, absolute and relative bioavailability, measurement of bioavailability, in-vitro drug dissolution models, in-vitro, in-vivo correlations, bioequivalence studies, methods to enhance the bioavailability.

UNIT- III **10 Hours**

Pharmacokinetics: Introduction to Pharmacokinetics models, Compartment models, Non compartment models, physiological models, One compartment open model. a. Intravenous Injection (Bolus) b. Intravenous infusion, extra vascular administrations, calculations of Ka, K_E. From plasma and urinary excretion data

UNIT- IV **08 Hours**

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Multicompartment models: Two compartment open model. IV bolus

Multiple – Dosage Regimens.

a). Repititive Intravenous injections – One Compartment Open Model

b). Repititive Extravascular dosing – One Compartment Open model

UNIT- V **07 Hours**

Nonlinear Pharmacokinetics: a. Introduction, b. Factors causing Non-linearity. c. Michaelis-menton method of estimating parameters, Biotransformation of drugs

Recommended Books: (Latest Editions)

1. Biopharmaceutics and Clinical Pharmacokinetics by, Milo Gibaldi.
2. Biopharmaceutics and Pharmacokinetics; By Robert F Notari
3. Applied biopharmaceutics and pharmacokinetics, Leon Shargel and Andrew B.C.YU 4th edition,Prentice-Hall Inernational edition.USA
4. Bio pharmaceutics and Pharmacokinetics-A Treatise, By D. M. Brahmankar and Sunil B.Jaiswal,Vallabh Prakashan Pitampura, Delhi
5. Pharmacokinetics: By Milo Gibaldi Donald, R. Mercel Dekker Inc.
6. Hand Book of Clinical Pharmacokinetics, By Milo Gibaldi and Laurie Prescott by ADIS Health Science Press.
7. Biopharmaceutics; By Swarbrick :
8. Clinical Pharmacokinetics, Concepts and Applications: By Malcolm Rowland and
9. Thomas, N. Tozen, Lea and Febrger, Philadelphia, 1995.
10. Dissolution, Bioavailability and Bioequivalence, By Abdou H.M, Mack, Publishing Company,Pennsylvania 1989.
11. Biopharmaceutics and Clinical Pharmacokinetics-An introduction 4th edition Revised and expanded by Rebort F Notari Marcel Dekker Inn, New York and Basel, 1987.
12. Remington's Pharmaceutical Sciences, By Mack Publishing Company, Pennsylvnia

EVALUATION OF IN-VIVO ANTI-AMNESIC ACTIVITY OF ETHANOLIC LEAF EXTRACT OF *OCIMUM SANCTUM*

A Dissertation submitted to

KAKINADA

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

In the partial fulfillment of the requirements for the

Award of the degree of

BACHELOR OF PHARMACY

Submitted by

DINESH TEJA.B (193H1R0005)

MURALI KRISHNA.CH (193H1R0007)

PRAMEELA.B(193H1R0006)

NAGUR RAJU.CH (193H1R0008)

GOWRI PRIYA.D (193H1R0009)

Under the Guidance of

K. GNANESHWARI, M. Pharm.

DEPARTMENT OF PHARMACOLOGY

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CERTIFICATE

This is to certify that dissertation entitled **"EVALUATION OF IN-VIVO ANTI-AMNESIC ACTIVITY OF ETHANOLIC LEAF EXTRACT OF *OCIMUM SANCTUM*"** submitted by **DINESH TEJA.B (193H1R0005), PRAMEELA.B (193H1R0006), MURALI KRISHNA.CH (193H1R0007), NAGURRAJU.CH (193H1R0008), GOWRIPRIYA.D (193H1R0009)** of Aditya College of Pharmacy, Surampalem, affiliated **JNTU University, Kakinada,** for partial fulfillment of degree of **Bachelor of Pharmacy.** The report embedded in this thesis was carried out under the guidance of Ms. **K. Gnaneshwari,** M.Pharm, Assistant Professor, Dept. Of Pharmacology, Aditya College of Pharmacy.

Dr. K. Ravi Shankar. M. Pharm., Ph.D.
Principal,
Aditya College of Pharmacy,
Surampalem-533437,
East Godavari District (A.P)

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM- 533 437

Internal Examiner

ADITYA COLLEGE OF PHARMACY SURAMPALEM

External Examiner

BP 603 T. HERBAL DRUG TECHNOLOGY (Theory)

45 hours

Scope: This subject gives the student the knowledge of basic understanding of herbal drug industry, the quality of raw material, guidelines for quality of herbal drugs, herbal cosmetics, natural sweeteners, nutraceutical etc. The subject also emphasizes on Good Manufacturing Practices (GMP), patenting and regulatory issues of herbal drugs

Objectives: Upon completion of this course the student should be able to:

1. understand raw material as source of herbal drugs from cultivation to herbal drug product
2. know the WHO and ICH guidelines for evaluation of herbal drugs
3. know the herbal cosmetics, natural sweeteners, nutraceuticals
4. appreciate patenting of herbal drugs, GMP .

Course content:

UNIT-I **6 Hours**

Herbs as raw materials

Definition of herb, herbal medicine, herbal medicinal product, herbal drug preparation
Source of Herbs
Selection, identification and authentication of herbal materials
Processing of herbal raw material

Biodynamic Agriculture

Good agricultural practices in cultivation of medicinal plants including Organic farming.
Pest and Pest management in medicinal plants: Biopesticides/Bioinsecticides.

UNIT-II **05 Hours**

a) Basic principles involved in Ayurveda, Siddha, Unani and Homeopathy
b) Preparation and standardization of Ayurvedic formulations viz Aristas and Asawas, Ghutika,Churna, Lehya and Bhasma.

UNIT-III **7 Hours**

Nutraceuticals

General aspects, Market, growth, scope and types of products available in the market. Health benefits and role of Nutraceuticals in ailments like Diabetes, CVS diseases, Cancer, Irritable bowel syndrome and various Gastro intestinal diseases.
Study of following herbs as health food: Alfaalfa, Chicory, Ginger, Fenugreek, Garlic, Honey, Amla, Ginseng, Ashwagandha, Spirulina

Herbal-Drug and Herb-Food Interactions: General introduction to interaction and classification. Study of following drugs and their possible side effects and interactions: Hypercium, kava-kava, Ginkobiloba, Ginseng, Garlic, Pepper & Ephedra.

UNIT-IV **10 Hours**

Herbal Cosmetics

Sources and description of raw materials of herbal origin used via, fixed oils, waxes, gums colours, perfumes, protective agents, bleaching agents, antioxidants in products such as skin care, hair care and oral hygiene products.

Herbal excipients:
Herbal Excipients – Significance of substances of natural origin as excipients – colorants, sweeteners, binders, diluents, viscosity builders, disintegrants, flavors & perfumes.

Herbal formulations :
Conventional herbal formulations like syrups, mixtures and tablets and Novel dosage forms like phytosomes

UNIT- V **10 Hours**

Evaluation of Drugs WHO & ICH guidelines for the assessment of herbal drugs
Stability testing of herbal drugs.

Patenting and Regulatory requirements of natural products:
a) Definition of the terms: Patent, IPR, Farmers right, Breeder's right, Bioprospecting and Biopiracy
b) Patenting aspects of Traditional Knowledge and Natural Products. Case study of Curcuma & Neem.

Regulatory Issues - Regulations in India (ASU DTAB, ASU DCC), Regulation of manufacture of ASU drugs - Schedule Z of Drugs & Cosmetics Act for ASU drugs.

UNIT-VI **07 Hours**

General Introduction to Herbal Industry
Herbal drugs industry: Present scope and future prospects.
A brief account of plant based industries and institutions involved in work on medicinal and aromatic plants in India.

Schedule T – Good Manufacturing Practice of Indian systems of medicine
Components of GMP (Schedule – T) and its objectives
Infrastructural requirements, working space, storage area, machinery and equipments, standard operating procedures, health and hygiene, documentation and records.

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STANDARDIZATION AND EVALUATION OF POLY HERBAL FORMULATION (PLATENZA TABLETS)

Dissertation submitted to
Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the requirements for the degree of Bachelor of Pharmacy

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

Under the Guidance of

MRS. DIVYA NAKKA, M.Pharm,
Assoc Professor, Dept of Ph Analysis

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SURAMPALEM – 533437

APRIL 2023

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Website: www.acop.edu.in

CERTIFICATE

This is to certify that the dissertation entitled "STANDARDIZATION AND EVALUATION OF POLY HERBAL FORMULATION (PLATENZA TABLETS)" was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the award ofthe degree of **Bachelor of pharmacy** is a record of original research work carried out by [illegible] They have done this research work under the supervision of Mrs. DIVYA NARLA *M. Pharm.* and it has not been previously submitted to any other university oracademic institution for any higher degree.

DR. K. RAVI SHANKAR
Principal
Aditya College of Pharmacy,
Surampalem- 533437.

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ADITYA COLLEGE OF PHARMACY SURAMPALEM

Place: Surampalem

Date: 15.04.2023

Internal examiner

ADITYA COLLEGE OF PHARMACY SURAMPALEM

External examiner

BP402T. MEDICINAL CHEMISTRY – I (Theory)

45 Hours

Scope: This subject is designed to impart fundamental knowledge on the structure, chemistry and therapeutic value of drugs. The subject emphasizes on structure activity relationships of drugs, importance of physicochemical properties and metabolism of drugs. The syllabus also emphasizes on chemical synthesis of important drugs under each class.

Objectives: Upon completion of the course the student shall be able to

1. understand the chemistry of drugs with respect to their pharmacological activity
2. understand the drug metabolic pathways, adverse effect and therapeutic value of drugs
3. know the Structural Activity Relationship (SAR) of different class of drugs
4. write the chemical synthesis of some drugs

Course Content:

Study of the development of the following classes of drugs, Classification, mechanism of action, uses of drugs mentioned in the course, Structure activity relationship of selective class of drugs as specified in the course and synthesis of drugs superscripted (*)

UNIT- I **10 Hours**

Introduction to Medicinal Chemistry

History and development of medicinal chemistry

Physicochemical properties in relation to biological action

Ionization, Solubility, Partition Coefficient, Hydrogen bonding, Protein binding, Chelation, Bioisosterism, Optical and Geometrical isomerism.

Drug metabolism

Drug metabolism principles- Phase I and Phase II.

Factors affecting drug metabolism including stereo chemical aspects.

UNIT- II **10 Hours**

Drugs acting on Autonomic Nervous System

Adrenergic Neurotransmitters:

Biosynthesis and catabolism of catecholamine.

Adrenergic receptors (Alpha & Beta) and their distribution.

Sympathomimetic agents: SAR of Sympathomimetic agents

Direct acting: Nor-epinephrine, Epinephrine, Phenylephrine*, Dopamine,

Methyldopa, Clonidine, Dobutamine, Isoproterenol, Terbutaline, Salbutamol*, Bitolterol, Naphazoline, Oxymetazoline and Xylometazoline.

- Indirect acting agents: Hydroxyamphetamine, Pseudoephedrine, Propylhexedrine.
- Agents with mixed mechanism: Ephedrine, Metaraminol.

Adrenergic Antagonists:

Alpha adrenergic blockers: Tolazoline*, Phentolamine, Phenoxybenzamine, Prazosin, Dihydroergotamine, Methysergide.

Beta adrenergic blockers: SAR of beta blockers, Propranolol*, Metibranolol, Atenolol, Betazolol, Bisoprolol, Esmolol, Metoprolol, Labetolol, Carvedilol.

UNIT-III **10 Hours**

Cholinergic neurotransmitters:

Biosynthesis and catabolism of acetylcholine.

Cholinergic receptors (Muscarinic & Nicotinic) and their distribution.

Parasympathomimetic agents: SAR of Parasympathomimetic agents

Direct acting agents: Acetylcholine, Carbachol*, Bethanechol, Methacholine, Pilocarpine.

Indirect acting/ Cholinesterase inhibitors (Reversible & Irreversible): Physostigmine, Neostigmine*, Pyridostigmine, Edrophonium chloride, Tacrine hydrochloride, Ambenonium chloride, Isofluorphate, Echothiophate iodide, Parathione, Malathion.

Cholinesterase reactivator: Pralidoxime chloride.

Cholinergic Blocking agents: SAR of cholinolytic agents

Solanaceous alkaloids and analogues: Atropine sulphate, Hyoscyamine sulphate, Scopolamine hydrobromide, Homatropine hydrobromide, Ipratropium bromide*.

Synthetic cholinergic blocking agents: Tropicamide, Cyclopentolate hydrochloride, Clidinium bromide, Dicyclomine hydrochloride*, Glycopyrrolate, Methantheline bromide, Propantheline bromide, Benztropine mesylate, Orphenadrine citrate, Biperidine hydrochloride, Procyclidine hydrochloride*, Tridihexethyl chloride, Isopropamide iodide, Ethopropazine hydrochloride.

UNIT- IV **08 Hours**

Drugs acting on Central Nervous System

A. Sedatives and Hypnotics:

Benzodiazepines: SAR of Benzodiazepines, Chlordiazepoxide, Diazepam*, Oxazepam, Chlorazepate, Lorazepam, Alprazolam, Zolpidem

Barbiturtes: SAR of barbiturates, Barbital*, Phenobarbital, Mephobarbital, Amobarbital, Butabarbital, Pentobarbital, Secobarbital

Miscelleneous:

Amides & imides: Glutethmide.

Alcohol & their carbamate derivatives: Meprobomate, Ethchlorvynol.

Aldehyde & their derivatives: Triclofos sodium, Paraldehyde.

B. Antipsychotics

Phenothiazeines: SAR of Phenothiazeines - Promazine hydrochloride, Chlorpromazine hydrochloride*, Triflupromazine, Thioridazine hydrochloride, Piperacetazine hydrochloride, Prochlorperazine maleate, Trifluoperazine hydrochloride.

Ring Analogues of Phenothiazeines: Chlorprothixene, Thiothixene, Loxapine succinate, Clozapine.

Fluro buterophenones: Haloperidol, Droperidol, Risperidone.

Beta amino ketones: Molindone hydrochloride.

Benzamides: Sulpieride.

C. Anticonvulsants: SAR of Anticonvulsants, mechanism of anticonvulsant action

Barbiturates: Phenobarbitone, Methabarbital.

Hydantoins: Phenytoin*, Mephenytoin, Ethotoin

Oxazolidine diones: Trimethadione, Paramethadione

Succinimides: Phensuximide, Methsuximide, Ethosuximide*

Urea and monoacylureas: Phenacemide, Carbamazepine*

Benzodiazepines: Clonazepam

Miscellaneous: Primidone, Valproic acid , Gabapentin, Felbamate

UNIT – V **07 Hours**

Drugs acting on Central Nervous System

General anesthetics:

Inhalation anesthetics: Halothane*, Methoxyflurane, Enflurane, Sevoflurane, Isoflurane, Desflurane.

Ultra short acting barbitutrates: Methohexital sodium*, Thiamylal sodium, Thiopental sodium.

Dissociative anesthetics: Ketamine hydrochloride.*

Narcotic and non-narcotic analgesics

Morphine and related drugs: SAR of Morphine analogues, Morphine sulphate, Codeine, Meperidine hydrochloride, Anilerdine hydrochloride, Diphenoxylate hydrochloride, Loperamide hydrochloride, Fentanyl citrate*, Methadone hydrochloride*, Propoxyphene hydrochloride, Pentazocine, Levorphanol tartarate.

Narcotic antagonists: Nalorphine hydrochloride, Levallorphan tartarate, Naloxone hydrochloride.

Anti-inflammatory agents: Sodium salicylate, Aspirin, Mefenamic acid*, Meclofenamate, Indomethacin, Sulindac, Tolmetin, Zomepriac, Diclofenac, Ketorolac, Ibuprofen*, Naproxen, Piroxicam, Phenacetin, Acetaminophen, Antipyrine, Phenylbutazone.

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COMPARATIVE STUDY OF DIFFERENT SUPERDISINTEGRANTS IN DESIGNING OF DICLOFENAC SODIUM FAST DISINTEGRATING TABLETS

Dissertation submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY,

KAKINADA

In the partial fulfillment of the requirements for the Award of the degree of

BACHELOR OF PHARMACY

Submitted by

ONY MAHESH VARDHINI (193H1R0015)

I.SAI SUDHA (193H1R0018)

HARUN (193H1R0016)

J.S.V.SURENUKA (193H1R0019)

USHPA MADHURI (193H1R0017)

Under the Guidance of

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ADITYA COLLEGE OF PHARMACY

SURAMPALEM-533437

APRIL-2019

ADITYA
COLLEGE OF PHARMACY
Approved by AICTE & PCI - NEW DELHI, Affiliated to JNTUK KAKINADA
Formerly known as Sri Sai Aditya Institute of Pharmaceutical Sciences & Research
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CERTIFICATE

is to certify that the investigation described in this thesis entitled "COMPARATIVE STUDY OF FERENT SUPERDISINTEGRANTS IN DESIGNING OF DICLOFENAC SODIUM FAST INTEGRATING TABLETS" was submitted by G.SONY MAHESH VARDHINI(193H1R0015), HARUN(193H1R0016), G.PUSHPA MADHURI(193H1R0017), I.SAI SUDHA(193H1R0018), J.SURENUKA(193H1R0019) of Aditya College of Pharmacy (Affiliated to JNTU Kakinada) for the partial llment of Degree of Bachelor of Pharmacy in the Department of pharmaceutics. The report embedded in this is was carried out under the Guidance of Mrs. K. KEERTHISAI, Assistant professor, Dept. of pharmaceutics ditya College of Pharmacy,Surampalem.

Principal,

K.Ravi Shankar M. Pharm, Ph.D,

Aditya College of Pharmacy, Surampalem-533437

Dist:East Godavari(A.P).

ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
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BP203 T. BIOCHEMISTRY (Theory)

45 Hours

Scope: Biochemistry deals with complete understanding of the molecular levels of the chemical process associated with living cells. The scope of the subject is providing biochemical facts and the principles to understand metabolism of nutrient molecules in physiological and pathological conditions. It is also emphasizing on genetic organization of mammalian genome and hetero & autocatalytic functions of DNA.

Objectives: Upon completion of course student shall able to

1. Understand the catalytic role of enzymes, importance of enzyme inhibitors in design of new drugs, therapeutic and diagnostic applications of enzymes.
2. Understand the metabolism of nutrient molecules in physiological and pathological conditions.
3. Understand the genetic organization of mammalian genome and functions of DNA in the synthesis of RNAs and proteins.

Course Content:

UNIT I **10 Hours**

- **Carbohydrate metabolism**

  Glycolysis – Pathway, energetics and significance

  Citric acid cycle- Pathway, energetics and significance

  HMP shunt and its significance; Glucose-6-Phosphate dehydrogenase (G6PD) deficiency

  Glycogen metabolism Pathways and glycogen storage diseases (GSD)

  Gluconeogenesis- Pathway and its significance

  Hormonal regulation of blood glucose level and Diabetes mellitus

- **Biological oxidation**

  Electron transport chain (ETC) and its mechanism.

  Oxidative phosphorylation & its mechanism and substrate level phosphorylation

  Inhibitors ETC and oxidative phosphorylation/Uncouplers

UNIT II **10 Hours**

- **Lipid metabolism**

  β-Oxidation of saturated fatty acid (Palmitic acid)

UNIT V 07 Hours

- **Enzymes**

  Introduction, properties, nomenclature and IUB classification of enzymes

  Enzyme kinetics (Michaelis plot, Line Weaver Burke plot)

  Enzyme inhibitors with examples

  Regulation of enzymes: enzyme induction and repression, allosteric enzymes regulation

  Therapeutic and diagnostic applications of enzymes and isoenzymes

  Coenzymes –Structure and biochemical functions

BP 209 P. BIOCHEMISTRY (Practical)

4 Hours / Week

1. Qualitative analysis of carbohydrates (Glucose, Fructose, Lactose, Maltose, Sucrose and starch)
2. Identification tests for Proteins (albumin and Casein)
3. Quantitative analysis of reducing sugars (DNSA method) and Proteins (Biuret method)
4. Qualitative analysis of urine for abnormal constituents
5. Determination of blood creatinine
6. Determination of blood sugar
7. Determination of serum total cholesterol
8. Preparation of buffer solution and measurement of pH
9. Study of enzymatic hydrolysis of starch
10. Determination of Salivary amylase activity
11. Study the effect of Temperature on Salivary amylase activity.
12. Study the effect of substrate concentration on salivary amylase activity.

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SURAMPALEM- 533 437

EXTRACTION, PHYTOCHEMICAL AND BIOLOGICAL SCREENING OF SANTALUM ALBUM

Dissertation submitted to

Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the requirements for the degree of Bachelor of Pharmacy

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

K. KUMARA VARA PRASAD 193H1R0020
K. JAHNAVI 193H1R0021
K. LAKSHMI NARAYANA 193H1R0022
K.G.SAI SAMPATH 193H1R0023
K. EVANOIL 193H1R0024

Under the Guidance of

NETHI SREE GAYATRI
M. Pharm
ASSISTANT PROFESSOR

ADITYA COLLEGE OF PHARMACY
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APRIL 2022

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SURAMPALEM- 533 437

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COLLEGE OF PHARMACY
Approved by AICTE & PCI – NEW DELHI, Affiliated to JNTUK KAKINADA
(Formerly known as Sri Sai Aditya Institute of Pharmaceutical Science & Research)
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CERTIFICATE

s is to certify that the dissertation entitled "EXTRACTION, PHYTOCHEMICAL AND LOGICAL SCREENING OF SANTALUM ALBUM" was submitted to the Jawaharlal aru Technological University, Kakinada in partial fulfillment of the requirements for award of the degree of **Bachelor of pharmacy** is a record of original research work ried out by K. KHADIRA VARA PRASAD (19S1R00201), K. SHIVANI (19S1R00211), K. KSHMI NARAYANA (19S1R00222), K. VENU SAMPATH (19S1R00235), K. P.S. VASHI (19S1R00240). They have done this research work under the supervision of NUTHI SREE YATRI *M. Pharm*, and it has not been previously submitted to any other university or demic institution for any higher degree.

Dr. K. Ravi Shankar, *M.Pharm, Ph.D*
Principal and Professor,
Aditya College of Pharmacy,
Surampalem- 533437.

Place: Surampalem
Date: 15/4/2023

PRINCIPAL
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Internal Examiner

External Examiner

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BP601T. MEDICINAL CHEMISTRY – III (Theory)

45 Hours

Scope: This subject is designed to impart fundamental knowledge on the structure, chemistry and therapeutic value of drugs. The subject emphasis on modern techniques of rational drug design like quantitative structure activity relationship (QSAR), Prodrug concept, combinatorial chemistry and Computer aided drug design (CADD). The subject also emphasizes on the chemistry, mechanism of action, metabolism, adverse effects, Structure Activity Relationships (SAR), therapeutic uses and synthesis of important drugs.

Objectives: Upon completion of the course student shall be able to

1. Understand the importance of drug design and different techniques of drug design.
2. Understand the chemistry of drugs with respect to their biological activity.
3. Know the metabolism, adverse effects and therapeutic value of drugs.
4. Know the importance of SAR of drugs.

Course Content:

Study of the development of the following classes of drugs, Classification, mechanism of action, uses of drugs mentioned in the course, Structure activity relationship of selective class of drugs as specified in the course and synthesis of drugs superscripted by (*)

UNIT – I **10 Hours**

Antibiotics

Historical background, Nomenclature, Stereochemistry, Structure activity relationship, Chemical degradation classification and important products of the following classes.

β-Lactam antibiotics: Penicillin, Cepholosporins, β- Lactamase inhibitors, Monobactams

Aminoglycosides: Streptomycin, Neomycin, Kanamycin

Tetracyclines: Tetracycline,Oxytetracycline, Chlortetracycline, Minocycline, Doxycycline

UNIT – II **10 Hours**

Antibiotics

Historical background, Nomenclature, Stereochemistry, Structure activity relationship, Chemical degradation classification and important products of the following classes.

Macrolide: Erythromycin Clarithromycin, Azithromycin.

Miscellaneous: Chloramphenicol*, Clindamycin.

Prodrugs: Basic concepts and application of prodrugs design.

Antimalarials: Etiology of malaria.

Quinolines: SAR, Quinine sulphate, Chloroquine*, Amodiaquine, Primaquine phosphate, Pamaquine*, Quinacrine hydrochloride, Mefloquine.

Biguanides and dihydro triazines: Cycloguanil pamoate, Proguanil.

Miscellaneous: Pyrimethamine, Artesunete, Artemether, Atovoquone.

UNIT – III **10 Hours**

Anti-tubercular Agents

Synthetic anti tubercular agents: Isoniozid*, Ethionamide, Ethambutol, Pyrazinamide, Para amino salicylic acid.*

Anti tubercular antibiotics: Rifampicin, Rifabutin, Cycloserine Streptomycine, Capreomycin sulphate.

Urinary tract anti-infective agents

Quinolones: SAR of quinolones, Nalidixic Acid,Norfloxacin, Enoxacin, Ciprofloxacin*, Ofloxacin, Lomefloxacin, Sparfloxacin, Gatifloxacin, Moxifloxacin

Miscellaneous: Furazolidine, Nitrofurantoin*, Methanamine.

Antiviral agents:

Amantadine hydrochloride, Rimantadine hydrochloride, Idoxuridine trifluoride, Acyclovir*, Gancyclovir, Zidovudine, Didanosine, Zalcitabine, Lamivudine, Loviride, Delavirding, Ribavirin, Saquinavir, Indinavir, Ritonavir.

UNIT – IV **08 Hours**

Antifungal agents:

Antifungal antibiotics: Amphotericin-B, Nystatin, Natamycin, Griseofulvin.

Synthetic Antifungal agents: Clotrimazole, Econazole, Butoconazole, Oxiconazole Tioconozole, Miconazole*, Ketoconazole, Terconazole, Itraconazole, Fluconazole, Naftifine hydrochloride, Tolnaftate*.

Anti-protozoal Agents: Metronidazole*, Tinidazole, Ornidazole, Diloxanide, Iodoquinol, Pentamidine Isethionate, Atovaquone, Eflornithine.

Anthelmintics: Diethylcarbamazine citrate*, Thiabendazole, Mebendazole*, Albendazole, Niclosamide, Oxamniquine, Praziquantal, Ivermectin.

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Sulphonamides and Sulfones

Historical development, chemistry, classification and SAR of Sulfonamides: Sulphamethizole, Sulfisoxazole, Sulphamethizine, Sulfacetamide*, Sulphapyridine, Sulfamethoxaole*, Sulphadiazine, Mefenide acetate, Sulfasalazine.

Folate reductase inhibitors: Trimethoprim*, Cotrimoxazole.

Sulfones: Dapsone*.

UNIT – V **07 Hours**

Introduction to Drug Design

Various approaches used in drug design.

Physicochemical parameters used in quantitative structure activity relationship (QSAR) such as partition coefficient, Hammet's electronic parameter, Tafts steric parameter and Hansch analysis.

Pharmacophore modeling and docking techniques.

Combinatorial Chemistry: Concept and applications of combinatorial chemistry: solid phase and solution phase synthesis.

PHYTOCHEMICAL SCREENING AND ANTIHELMENTHIC ACTIVITY OF ETHANOLIC EXTRACT OF WATERMELON RIND

Dissertation submitted to Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the degree of Bachelor of Pharmacy

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

SUBMITTED BY

K.MOUNIKA(193H1R0025)

K.NIRMALA(193H1R0026)

K.MOUNICA(193H1R0027)

K.GOVARDHINI(193H1R0028)

L.SOWMYA(193H1R0029)

UNDER THE GUIDANCE OF

B.N.B.VAIDEHI, *M. Pharm*(Ph.D)

ADITYA COLLEGE OF PHARMACY

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APRIL-2023

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CERTIFICATE

This is to certify that the dissertation entitled **"PHYTOCHEMICAL SCREENING AND ANTIHELMENTHIC ACTIVITY OF ETHANOLIC EXTRACT OF WATERMELON RIND"** was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the award of the degree of **Bachelor of pharmacy** is a record of original research work carried out by **K.MOUNIKA (193H1R0025), K.NIRMALA (193H1R0026), K.MOUNICA (193H1R0027), K.GOVARDHINI (193H1R0028), L.SOWMYA (193H1R0029).** They have done this research work under the supervision of B.N.B.Vaidehi, *M. Pharm*,(Ph.D) and it has not been previously submitted to any other university or academic institution for any higher degree.

ADITYA COLLEGE OF PHARMACY SURAMPALEM

Principal,
Dr. K. Ravishankar, *M.Pharm, Ph.D*
Professor,
Aditya College of Pharmacy,
Surampalem- 533437.

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Internal Examiner 10/11/2023

External Examiner

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BP 609 P. HERBAL DRUG TECHNOLOGY (Practical)

4 hours/ week

1. To perform preliminary phytochemical screening of crude drugs.
2. Determination of Ash value
3. Determination of moisture content of crude drugs
4. Determination of Extractive values of crude drugs
5. Determination of the alcohol content of Asava and Arista
6. Preparation of herbal cosmetics
7. Preparation and standardization of herbal formulation
8. Determination of swelling index and foaming index
9. Monograph analysis of herbal drugs from recent Pharmacopoeias
10. Analysis of fixed oils

Recommended Books: (Latest Editions)

1. Textbook of Pharmacognosy by Trease & Evans.
2. Textbook of Pharmacognosy by Tyler, Brady & Robber.
3. Pharmacognosy by Kokate, Purohit and Gokhale
4. Essential of Pharmacognosy by Dr.S.H.Ansari
5. Pharmacognosy & Phytochemistry by V.D.Rangari
6. Pharmacopoeal standards for Ayurvedic Formulation (Council of Research in Indian Medicine & Homeopathy)
7. Mukherjee, P.W. Quality Control of Herbal Drugs: An Approach to Evaluation of Botanicals. Business Horizons Publishers, New Delhi, India, 2002.

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PRELIMINARY PHYTOCHEMICAL SCREENING, IN-VITRO ANTIBACTERIAL AND ANTHELMINTIC ACTIVITIES OF ETHANOLIC EXTRACT OF *CATHARANTHUS ROSEUS*

Dissertation submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

In the partial fulfilment of the requirements for the award of the degree of

BACHELOR OF PHARMACY

IN

PHARMACOLOGY

SESHAGIRI.M(193H1R00030) YAMINI.M(193H1R00032)

ASRITHA.M(193H1R00031) ANNE.PREETHAM.N(193H1R00033)

DIVYASRI.N(193H1R00034)

Under the Guidance of

DR.K. RAVI SHANKAR, M.PHARM., Ph.D.

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM- 533 437

ADITYA
COLLEGE OF PHARMACY

CERTIFICATE

This to certify that the investigation described in this thesis entitled "Preliminary Phytochemical Screening and In Vitro Antibacterial and Anthelmintic Activities of Ethanolic Extract of "*Catharanthus roseus*" was submitted by SESHAGIRI.M(193H1R0030), ASRITHA.M (193H1R0031), YAMINI.M (193H1R0032), ANNE PREETHAM.N(193H1R0033), DIVYASRI.N(193H1R0034) of Aditya College of Pharmacy (Affiliated to JNTU Kakinada) for partial fulfilment of Degree of Bachelor of Pharmacy in the Department of Pharmacology. The report embedded in this thesis was carried out under the Guidance of Dr. K. RAVI SHANKAR, M.Pharm., Ph. D, Professor, Dept. of Pharmacology Aditya College of Pharmacy, Surampalem.

ADITYA COLLEGE OF PHARMACY SURAMPALEM

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Dr. K. Ravi Shankar M.Pharm.Ph.D.

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BP 507 P. PHARMACOLOGY-II (Practical)

4Hrs/Week

1. Introduction to *in-vitro* pharmacology and physiological salt solutions.
2. Effect of drugs on isolated frog heart.
3. Effect of drugs on blood pressure and heart rate of dog.
4. Study of diuretic activity of drugs using rats/mice.
5. DRC of acetylcholine using frog rectus abdominis muscle.
6. Effect of physostigmine and atropine on DRC of acetylcholine using frog rectus abdominis muscle and rat ileum respectively.
7. Bioassay of histamine using guinea pig ileum by matching method.
8. Bioassay of oxytocin using rat uterine horn by interpolation method.
9. Bioassay of serotonin using rat fundus strip by three point bioassay.
10. Bioassay of acetylcholine using rat ileum/colon by four point bioassay.
11. Determination of PA_2 value of prazosin using rat anococcygeus muscle (by Schilds plot method).
12. Determination of PD_2 value using guinea pig ileum.
13. Effect of spasmogens and spasmolytics using rabbit jejunum.
14. Anti-inflammatory activity of drugs using carrageenan induced paw-edema model.
15. Analgesic activity of drug using central and peripheral methods

Note: All laboratory techniques and animal experiments are demonstrated by simulated experiments by softwares and videos

Recommended Books (Latest Editions)

1. Rang H. P., Dale M. M., Ritter J. M., Flower R. J., Rang and Dale's Pharmacology, Churchil Livingstone Elsevier
2. Katzung B. G., Masters S. B., Trevor A. J., Basic and clinical pharmacology, Tata Mc Graw-Hill.
3. Goodman and Gilman's, The Pharmacological Basis of Therapeutics
4. Marry Anne K. K., Lloyd Yee Y., Brian K. A., Robbin L.C., Joseph G. B., Wayne A. K., Bradley R.W., Applied Therapeutics, The Clinical use of Drugs, The Point Lippincott Williams & Wilkins.
5. Mycek M.J, Gelnet S.B and Perper M.M. Lippincott's Illustrated Reviews-Pharmacology.
6. K.D.Tripathi. Essentials of Medical Pharmacology, , JAYPEE Brothers Medical Publishers (P) Ltd, New Delhi.
7. Sharma H. L., Sharma K. K., Principles of Pharmacology, Paras medical publisher
8. Modern Pharmacology with clinical Applications, by Charles R.Craig& Robert.
9. Ghosh MN. Fundamentals of Experimental Pharmacology. Hilton & Company, Kolkata.
10. Kulkarni SK. Handbook of experimental pharmacology. Vallabh Prakashan.

EVALUATION OF IN-VITRO ANTI OXIDANT AND ANTI- INFLAMMATORY ACTIVITIES OF ETHANOLIC PLANT EXTRACT OF SIDA ACUTA

Dissertation submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

In the partial fulfillment of the requirements for the Award of the degree of

BACHELOR OF PHARMACY

Submitted by

N.SURYA MAHALAKSHMI (193H1R0035)
P.SAMBHAVI (193H1R0036)
P.KEERTHI (193H1R0037)
P.SWAPNA (193H1R0039)
P.SIREESHA (193H1R0040)

Under the Guidance of

Dr.K RAVI SHANKAR M.Pharm , Ph.D

Principal &Professor

Department of Pharmacology

ADITYA COLLEGE OF PHARMACY

SURAMPALEM

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OLLEGE OF PHARMACY

CERTIFICATE

is is to certify that the dissertation work entitled "EVALUATION OF IN-VITRO ANTI XIDANT AND ANTI-INFLAMMATORY ACTIVITIES OF ETHANOLIC PLANT XTRACT OF SIDA ACUTA"is submitted to the JNT University, Kakinada in partial lfilment for the award of the degree of Bachelor of Pharmacy. This is a bonafied work carried ut by N.SURYA MAHALAKSHMI (193H1R0035), P.SAMBHAVI (193H1R0036), .KEERTHI(193H1R0037), P.SWAPNA (193H1R0039), P. SIREESHA (193H1R0040), nder the Guidance and supervision of Dr.K RAVI SHANKAR , M.Pharm , Ph.D professor & rincipal (department of pharmacology).

Principal

Dr. K .Ravi Shankar M.Pharm ,Ph.D,

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BP 704T: NOVEL DRUG DELIVERY SYSTEMS (Theory)

45 Hours

Scope: This subject is designed to impart basic knowledge on the area of novel drug delivery systems.

Objectives: Upon completion of the course student shall be able

1. To understand various approaches for development of novel drug delivery systems.
2. To understand the criteria for selection of drugs and polymers for the development of Novel drug delivery systems, their formulation and evaluation

Course content:

Unit-I **10 Hours**

Controlled drug delivery systems: Introduction, terminology/definitions and rationale, advantages, disadvantages, selection of drug candidates.Approaches to design controlled release formulations based on diffusion, dissolution and ion exchange principles. Physicochemical and biological properties of drugs relevant to controlled release formulations

Polymers: Introduction, classification, properties, advantages and application of polymers in formulation of controlled release drug delivery systems.

Unit-II **10 Hours**

Microencapsulation: Definition, advantages and disadvantages, microspheres /microcapsules, microparticles, methods of microencapsulation, applications

Mucosal Drug Delivery system: Introduction, Principles of bioadhesion / mucoadhesion, concepts, advantages and disadvantages, transmucosal permeability and formulation considerations of buccal delivery systems

Implantable Drug Delivery Systems: Introduction, advantages and disadvantages, concept of implantsand osmotic pump

Unit-III **10 Hours**

Transdermal Drug Delivery Systems: Introduction, Permeation through skin, factors affecting permeation, permeation enhancers, basic components of TDDS, formulation approaches

Gastroretentive drug delivery systems: Introduction, advantages, disadvantages, approaches for GRDDS – Floating, high density systems, inflatable and gastroadhesive systems and their applications

Nasopulmonary drug delivery system: Introduction to Nasal and Pulmonary routes of drug delivery, Formulation of Inhalers (dry powder and metered dose), nasal sprays, nebulizers

Unit-IV **08 Hours**

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Nanotechnology and its Concepts: Concepts and approaches for targeted drug delivery systems, advantages and disadvantages, introduction to liposomes, niosomes, nanoparticles, monoclonal antibodies and their applications

Unit-V **07 Hours**

Ocular Drug Delivery Systems: Introduction, intra ocular barriers and methods to overcome –Preliminary study, ocular formulations and ocuserts

Intrauterine Drug Delivery Systems: Introduction, advantages and disadvantages, development of intra uterine devices (IUDs) and applications

Recommended Books: (Latest Editions)

1. Y W. Chien, Novel Drug Delivery Systems, 2nd edition, revised and expanded, Marcel Dekker, Inc., New York, 1992.
2. Robinson, J. R., Lee V. H. L, Controlled Drug Delivery Systems, Marcel Dekker, Inc., New York, 1992.
3. Encyclopedia of Controlled Delivery. Edith Mathiowitz, Published by Wiley Interscience 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)
4. Drug Development and Industrial Pharmacy (Marcel & Decker)
5. International Journal of Pharmaceutics (Elsevier Sciences)

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"FORMULATION AND EVALUATION OF CIPROFLOXACIN FLOATING TABLETS USING NATURAL SWELLABLE POLYMERS"

Dissertation submitted to

Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the requirements for the degree of Bachelor of Pharmacy

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

SUBMITTED BY

P. SUNITHA (193H1R0041)
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S. DIVYA SRI (193H1R0043)
S. LIKHITHA (193H1R0044)
S. MOUNIKA (193H1R0045)

UNDER THE GUIDANCE OF

M.SESHA SAI DURGA, *M. Pharm*
Asst Professor, Dept of pharmaceutics

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CERTIFICATE

This is to certify that the dissertation entitled **"FORMULATION AND EVALUATION OF CIPROFLOXACIN FLOATING TABLETS USING NATURAL SWELLABLE POLYMERS"** was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the award of the degree of **Bachelor of pharmacy** is a record of original research work carried out by P. SUNITHA (193H1R0041) R. SARASWATHI (193H1R0042) S. DIVYA SRI (193H1R0043) S. LIKHITHA (193H1R0044) S. MOUNIKA (193H1R0045). They have done this research work under the supervision of M. Sesha Sai Durga, *M. Pharm* and it has not been previously submitted to any other university or academic institution for any higher degree.

Dr. K. Ravishankar, M. *Pharm, Ph.D.*

Principal and Professor,

Aditya College of Pharmacy,

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Place: Surampalem

Date: 15-04-2023

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BP 702 T. INDUSTRIAL PHARMACY (Theory)

45 Hours

Scope: This course is designed to impart fundamental knowledge on pharmaceutical product commercialization from laboratory to market

Objectives: Upon completion of the course, the student shall be able to:

1. Know the process of pilot plant and scale up of pharmaceutical dosage forms
2. Understand the process of technology transfer from lab scale to commercial batch
3. Know different laws and acts that regulate pharmaceutical industry in India and US
4. Understand the approval process and regulatory requirements for drug products

Course Content:

UNIT-I **10 Hours**

Pilot plant scale up techniques: General considerations - including significance of personnel requirements, space requirements, raw materials, Pilot plant scale up considerations for solids, liquid orals, semi solids and relevant documentation, SUPAC guidelines, Introduction to Platform technology

UNIT-II **10 Hours**

Technology development and transfer: WHO guidelines for Technology Transfer: Terminologies, Technology transfer protocol, Quality risk management, Transfer from R & D to production (Process, packaging and cleaning), Granularity of TT Process (API, excipients, finished products, packing materials) Documentation, Premises and equipments, qualification and validation, quality control, analytical method transfer, Approved regulatory bodies and agencies, Commercialization - practical aspects and problems (case studies), TOT agencies in India - APCTD, NRDC, TIFAC, BCIL, TBSE / SIDBI; Technology of Transfer (TOT) related documentation - confidentiality agreements, licensing, MoUs, legal issues

UNIT-III **10 Hours**

Regulatory affairs: Introduction, Historical overview of Regulatory Affairs, Regulatory authorities, Role of Regulatory affairs department, Responsibility of Regulatory Affairs Professionals

Regulatory requirements for drug approval: Drug Development Teams, Non-Clinical Drug Development, Pharmacology, Drug Metabolism and Toxicology, General considerations of Investigational New Drug (IND) Application, Investigator's Brochure (IB) and New Drug Application (NDA), Clinical research / BE studies, Clinical Research Protocols, Biostatistics in Pharmaceutical Product Development, Data Presentation for FDA Submissions, Management of Clinical Studies

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UNIT-IV **08 Hours**

Quality management systems: Quality management & Certifications: Concept of Quality, Total Quality Management, Quality by design, Six Sigma concept, Out of Specifications (OOS), Change control, Introduction to ISO 9000 series of quality systems standards, ISO 14000, NABL, GLP

UNIT-V **07 Hours**

Indian Regulatory Requirements: Central Drug Standard Control Organization (CDSCO) and State Licensing Authority: Organization, Responsibilities, Common Technical Document (CTD), Certificate of Pharmaceutical Product (COPP), Regulatory requirements and approval procedures for New Drugs.

Recommended Books: (Latest Editions)

1. Regulatory Affairs from Wikipedia, the free encyclopedia modified on 7th April available at http,//en.wikipedia.org/wiki/Regulatory_ Affairs.
2. International Regulatory Affairs Updates, 2005. available at http://www.iraup.com/about.php
3. Douglas J Pisano and David S. Mantus. Text book of FDA Regulatory Affairs A Guide for Prescription Drugs, Medical Devices, and Biologics' Second Edition.
4. Regulatory Affairs brought by learning plus, inc. available at http.//www.cgmp.com/ra.htm.

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"DEVELOPMENT AND VALIDATION OF COLORIMETRIC METHOD FOR THE QUANTITATIVE ANALYSIS OF AMIKACIN IN BULK AND PHARMACEUTICAL DOSAGE FORMS"

Dissertation submitted to

Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the requirements for the degree of Bachelor of Pharmacy

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

SUBMITTED BY

SHEIK ASHROF SAMEER (193H1R0046)
SIDDANTHAPU KALYANI (193H1R0047)
SUDHABATTULA SAIBABU (193H1R0048)
SIDDHANTAPU SUPRAJA (193H1R0049)
SURAMPUDI VEERA ANITHA (193H1R0050)

UNDER THE GUIDANCE OF

M. VINNY THERISSA, *M. Pharm*
Asst. Professor

ADITYA COLLEGE OF PHARMACY
SURAMPALEM - 533437

2022-23

PRINCIPAL
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ADITYA
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...ved by AICTE & PCI – NEW DELHI, Affiliated to JNTUK KAKINADA
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Website: www.acop.edu.in

CERTIFICATE

This is to certify that the dissertation entitled "DEVELOPMENT AND VALIDATION OF COLORIMETRIC METHOD FOR THE QUANTITATIVE ANALYSIS OF AMIKACIN IN BULK AND PHARMACEUTICAL DOSAGE FORMS" was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the award of the degree of **Bachelor of pharmacy** is a record of original research work carried out by SHEIK ASHROF SAMEER (193H1R0046), SIDDANTHAPU KALYANI (193H1R0047), SUDHABATTULA SAIBABU (193H1R0048), SIDDHANTAPU SUPRAJA (193H1R0049), SURAMPUDI VEERA ANITHA (193H1R0050). They have done this research work under the supervision of Ms. Vinny Therissa, *M. Pharm* and it has not been previously submitted to any other university or academic institution for any higher degree.

Dr. K. Ravishankar, M. *Pharm, Ph.D.*

Principal and Professor,

Aditya College of Pharmacy,

Surampalem- 533437.

Place: Surampalem

Date: 15/4/23

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Internal Examiner

External Examiner

ADITYA COLLEGE OF PHARMACY SURAMPALEM

BP 505 T. PHARMACEUTICAL JURISPRUDENCE (Theory)

45 Hours

Scope: This course is designed to impart basic knowledge on several important legislations related to the profession of pharmacy in India.

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

1. The Pharmaceutical legislations and their implications in the development and marketing
2. Various Indian pharmaceutical Acts and Laws
3. The regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals
4. The code of ethics during the pharmaceutical practice

Course Content:

UNIT-I **10 Hours**

Drugs and Cosmetics Act, 1940 and its rules 1945:

Objectives, Definitions, Legal definitions of schedules to the act and rules

Import of drugs – Classes of drugs and cosmetics prohibited from import, Import under license or permit. Offences and penalties.

Manufacture of drugs – Prohibition of manufacture and sale of certain drugs,

Conditions for grant of license and conditions of license for manufacture of drugs, Manufacture of drugs for test, examination and analysis, manufacture of new drug, loan license and repacking license.

UNIT-II **10 Hours**

Drugs and Cosmetics Act, 1940 and its rules 1945.

Detailed study of Schedule G, H, M, N, P.T.U, V, X, Y, Part XII B, Sch F & DMR (OA)

Sale of Drugs – Wholesale, Retail sale and Restricted license. Offences and penalties

Labeling & Packing of drugs- General labeling requirements and specimen labels for drugs and cosmetics, List of permitted colors. Offences and penalties.

Administration of the act and rules – Drugs Technical Advisory Board, Central drugs Laboratory, Drugs Consultative Committee, Government drug analysts, Licensing authorities, controlling authorities, Drugs Inspectors

UNIT-III **10 Hours**

- **Pharmacy Act –1948**: Objectives, Definitions, Pharmacy Council of India; its constitution and functions, Education Regulations, State and Joint state pharmacy councils; its constitution and functions, Registration of Pharmacists, Offences and

Penalties

- **Medicinal and Toilet Preparation Act –1955**: Objectives, Definitions, Licensing, Manufacture In bond and Outside bond, Export of alcoholic preparations, Manufacture of Ayurvedic, Homeopathic, Patent & Proprietary Preparations. Offences and Penalties.
- **Narcotic Drugs and Psychotropic substances Act-1985 and Rules**: Objectives, Definitions, Authorities and Officers, Constitution and Functions of narcotic & Psychotropic Consultative Committee, National Fund for Controlling the Drug Abuse, Prohibition, Control and Regulation, opium poppy cultivation and production of poppy straw, manufacture, sale and export of opium, Offences and Penalties

UNIT-IV **08 Hours**

- **Study of Salient Features of Drugs and magic remedies Act and its rules:** Objectives, Definitions, Prohibition of certain advertisements, Classes of Exempted advertisements, Offences and Penalties
- **Prevention of Cruelty to animals Act-1960:** Objectives, Definitions, Institutional Animal Ethics Committee, Breeding and Stocking of Animals, Performance of Experiments, Transfer and acquisition of animals for experiment, Records, Power to suspend or revoke registration, Offences and Penalties
- **National Pharmaceutical Pricing Authority:** Drugs Price Control Order (DPCO)-2013. Objectives, Definitions, Sale prices of bulk drugs, Retail price of formulations, Retail price and ceiling price of scheduled formulations, National List of Essential Medicines (NLEM)

UNIT-V **07 Hours**

- **Pharmaceutical Legislations** – A brief review, Introduction, Study of drugs enquiry committee, Health survey and development committee, Hathi committee and Mudaliar committee
- **Code of Pharmaceutical ethics** D efinition, Pharmacist in relation to his job, trade, medical profession and his profession, Pharmacist's oath
- **Medical Termination of pregnancy act**
- **Right to information Act**
- **Introduction to Intellectual Property Rights (IPR)**

Recommended books: (Latest Edition)

1. Forensic Pharmacy by B. Suresh

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2. Text book of Forensic Pharmacy by B.M. Mithal
3. Hand book of drug law-by M.L. Mehra
4. A text book of Forensic Pharmacy by N.K. Jain
5. Drugs and Cosmetics Act/Rules by Govt. of India publications.
6. Medicinal and Toilet preparations act 1955 by Govt. of India publications.
7. Narcotic drugs and psychotropic substances act by Govt. of India publications
8. Drugs and Magic Remedies act by Govt. of India publication
9.Bare Acts of the said laws published by Government. Reference books (Theory)

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FORMULATION AND EVALUATION OF AMLODIPINE SUSTAINED RELEASE MICROSPHERES

DISSERTATION SUBMITTED TO

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY,

KAKINADA

THE PARTIAL FULLFILMENT OF THE REQUIREMENT
FOR THE AWARD OF THE DEGREE OF
BACHELOR OF PHARMACY

T. LEELA BHAVANI (193H1R0051) T.SATYA SAI(193H1R0052)

T. HARIKA RAMYA (193H1R0053) B. LIKHITHA(193H1R0054)

V.KRISHNA PRIYA(193H1R0055)

UNDER THE GUIDANCE OF

T. PRASANTHI, M. PHARM, (Ph.D.)

Assistant professor,

Aditya College of Pharmacy

ADITYA COLLEGE OF PHARMACY
SURAMPALEM
APRIL - 2021

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CERTIFICATE

This is to certify that the dissertation work entitled FORMULATION AND EVALUATION OF AMLODIPINE SUSTAINED RELEASE MICROSPHERES is submitted to the JNTUK University, Kakinada in partial fulfillment for the award of the degree of Bachelor of Pharmacy. This is a bonafied work carried out *T. LEELA BHAVANI (193H1R0051), T. SATYA SAI (193H1R0052), S. HARIKA RAJU (193H1R0053), B. LIKHITHA (193H1R0054), T. KRISHNA PRIYA (193H1R0055)* under the guidance and supervision of Mrs. TELLA PRASANTHI M. Pharm Assistant professor, (DEPARTMENT OF PHARMACEUTICAL TECHNOLOGY).

PLACE: SURAMPALEM

DATE:

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DR.K. RAVI SHANKAR

M.PHARM, PH.D

Internal Examiner

External Examiner

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BP 502 T. Industrial PharmacyI (Theory)

45 Hours

Scope: Course enables the student to understand and appreciate the influence of pharmaceutical additives and various pharmaceutical dosage forms on the performance of the drug product.

Objectives: Upon completion of the course the student shall be able to

1. Know the various pharmaceutical dosage forms and their manufacturing techniques.
2. Know various considerations in development of pharmaceutical dosage forms
3. Formulate solid, liquid and semisolid dosage forms and evaluate them for their quality

Course content:

3 hours/ week

UNIT-I **07 Hours**

Preformulation Studies: Introduction to preformulation, goals and objectives, study of physicochemical characteristics of drug substances.

a. Physical properties: Physical form (crystal & amorphous), particle size, shape, flow properties, solubility profile (pKa, pH, partition coefficient), polymorphism

b. Chemical Properties: Hydrolysis, oxidation, reduction, racemisation, polymerization

BCS classification of drugs & its significant

Application of preformulation considerations in the development of solid, liquid oral and parenteral dosage forms and its impact on stability of dosage forms.

UNIT-II **10 Hours**

Tablets:

a. Introduction, ideal characteristics of tablets, classification of tablets. Excipients, Formulation of tablets, granulation methods, compression and processing problems. Equipments and tablet tooling.

b. Tablet coating: Types of coating, coating materials, formulation of coating composition, methods of coating, equipment employed and defects in coating.

c. Quality control tests: In process and finished product tests

Liquid orals: Formulation and manufacturing consideration of syrups and elixirs suspensions and emulsions; Filling and packaging; evaluation of liquid orals official in pharmacopoeia

UNIT-III **08 Hours**

Capsules:

a. ***Hard gelatin capsules:*** Introduction, Production of hard gelatin capsule shells. size of capsules, Filling, finishing and special techniques of formulation of hard gelatin capsules, manufacturing defects. In process and final product quality control tests for capsules.

b. ***Soft gelatin capsules:*** Nature of shell and capsule content, size of capsules,importance of base adsorption and minim/gram factors, production, in process and final product quality control tests. Packing, storage and stability testing of soft gelatin capsules and their applications.

Pellets: Introduction, formulation requirements, pelletization process, equipments for manufacture of pellets

UNIT-IV **10 Hours**

Parenteral Products:

a. Definition, types, advantages and limitations. Preformulation factors and essential requirements, vehicles, additives, importance of isotonicity

b. Production procedure, production facilities and controls, aseptic processing

c. Formulation of injections, sterile powders, large volume parenterals and lyophilized products.

d. Containers and closures selection, filling and sealing of ampoules, vials and infusion fluids. Quality control tests of parenteral products.

Ophthalmic Preparations: Introduction, formulation considerations; formulation of eye drops, eye ointments and eye lotions; methods of preparation; labeling, containers; evaluation of ophthalmic preparations

UNIT-V **10 Hours**

Cosmetics: Formulation and preparation of the following cosmetic preparations: lipsticks, shampoos, cold cream and vanishing cream, tooth pastes, hair dyes and sunscreens.

Pharmaceutical Aerosols: Definition, propellants, containers, valves, types of aerosol systems; formulation and manufacture of aerosols; Evaluation of aerosols; Quality control and stability studies.

Packaging Materials Science: Materials used for packaging of pharmaceutical products, factors influencing choice of containers, legal and official requirements for containers, stability aspects of packaging materials, quality control tests.

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"FORMULATION AND EVALUATION OF TRANSDERMAL PATCHES CONTAINING DONEPEZIL HYDROCHLORIDE"

Dissertation submitted to

Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the requirements for the degree of Bachelor of Pharmacy

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

SUBMITTED BY

AASTHA SINGH (193H1R0056)
ABRAR ANSARI (193H1R0058)
AMATAM SAI MANOGNA (193H1R0061)
ARCHANA KUMARI (193H1R0062)
SOUVIK DAS (193H1R0063)

UNDER THE GUIDANCE OF

S. Prakash Nathaniel Kumar, *M. Pharm.*

Assoc. Professor.

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This is to certify that the dissertation entitled "FORMULATION AND EVALUATION OF TRANSDERMAL PATCHES CONTAINING DONEPEZIL HYDROCHLORIDE" was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the award of the degree of **Bachelor of pharmacy** is a record of original research work carried out by AASTHA SINGH (193H1R0056), ABRAR ANSARI (193H1R0058), AMATAM SAI MANOGNA (193H1R0061), ARCHANA KUMARI (193H1R0062), SOUVIK DAS (193H1R0063). They have done this research work under the supervision of Mr. Sarella Prakash Nathaniel Kumar, *M. Pharm* and it has not been previously submitted to any other university or academic institution for any higher degree.

Dr. K. Ravishankar, *M.Pharm, Ph.D*

Principal and Professor,

Aditya College of Pharmacy,

Surampalem- 533437.

Place: Surampalem

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Internal Examiner

External Examiner

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BP 307P.PHARMACEUTICAL MICROBIOLOGY (Practical)

4 Hrs/week

1. Introduction and study of different equipments and processing, e.g., B.O.D. incubator, laminar flow, aseptic hood, autoclave, hot air sterilizer, deep freezer, refrigerator, microscopes used in experimental microbiology.
2. Sterilization of glassware, preparation and sterilization of media.
3. Sub culturing of bacteria and fungus. Nutrient stabs and slants preparations.
4. Staining methods- Simple, Grams staining and acid fast staining (Demonstration with practical).
5. Isolation of pure culture of micro-organisms by multiple streak plate technique and other techniques.
6. Microbiological assay of antibiotics by cup plate method and other methods
7. Motility determination by Hanging drop method.
8. Sterility testing of pharmaceuticals.
9. Bacteriological analysis of water
10. Biochemical test (IMViC reactions)
11. Revision Practical Class

Recommended Books (Latest edition)

1. W.B. Hugo and A.D. Russel: Pharmaceutical Microbiology, Blackwell Scientific publications, Oxford London.
2. Prescott and Dunn., Industrial Microbiology, 4th edition, CBS Publishers & Distributors, Delhi.
3. Pelczar, Chan Kreig, Microbiology, Tata McGraw Hill edn.
4. Malcolm Harris, Balliere Tindall and Cox: Pharmaceutical Microbiology.
5. Rose: Industrial Microbiology.
6. Probisher, Hinsdill et al: Fundamentals of Microbiology, 9th ed. Japan
7. Cooper and Gunn's: Tutorial Pharmacy, CBS Publisher and Distribution.
8. Peppler: Microbial Technology.
9. I.P., B.P., U.S.P.- latest editions.
10. Ananthnarayan : Text Book of Microbiology, Orient-Longman, Chennai
11. Edward: Fundamentals of Microbiology.
12. N.K.Jain: Pharmaceutical Microbiology, Vallabh Prakashan, Delhi
13. Bergeys manual of systematic bacteriology, Williams and Wilkins- A Waverly company

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PHYTOCHEMICAL EXTRACTION OF ABUTILON INDICUM AND IT'S ANTI-HELMINTIC AND ANTI-BACTERIAL ACTIVITY

Dissertation submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

In the partial fulfillment of the requirements for the Award of the degree of

BACHELOR OF PHARMACY

Submitted by

ARYAN KUMAR (193H1R0064)

ASHISH PRASAD KOHAR (193H1R0065)

GANGA .BANDE (193H1R0066)

BIJAY KUMAR CHAHUHAN (193H1R0067)

BIKASH KUMAR RAUNIYAR (193H1R0068)

Under the Guidance of

DR. K. SRINIVASA RAO M.A, Ph.D.

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APRIL - 2023

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CERTIFICATE

This is to certify that the investigation described in this thesis entitled **"PHYTOCHEMICAL EXTRACTION OF ABUTILON INDICUM AND IT'S ANTI-HELMINTICS AND ANTI-BACTERIAL ACTIVITY"** was submitted by **ARYAN KUMAR (193H1R0064), ASHISH PRASAD KOHAR (193H1R0065), GANGA BANDE (193H1R0066), BIJAY KUMAR CHAUHAN(193H1R0067), BIKASH KUMAR RAUNIYAR (193H1R0068)** of Aditya College of Pharmacy (Affiliated to JNTU Kakinada) for the partial fulfillment of Degree of Bachelor of Pharmacy in the Department of Pharmaceutical chemistry. The report embedded in this thesis was carried out under the Supervision of **Dr. RAMA KRISHNA KUPPALA,** Associate professor in the Department of Pharmaceutical chemistry, Aditya College of Pharmacy, Surampalem.

Prof. K. Ravi Shankar M.Pharm, Ph.D.

Principal, Aditya College of Pharmacy,
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BP 403 T. PHYSICAL PHARMACEUTICS-II (Theory)

45Hours

Scope: The course deals with the various physical, physicochemical properties and principle involved in dosage forms, formulations. Theory and practical components of the subject help the student to get a better insight in to various areas of formulation research and development and stability studies of pharmaceuticals.

Objectives: Upon the completion of the course student shall be able to

1. Understand various physicochemical properties of drug molecules in the designing the dosage form
2. Know the principles of chemical kinetics & to use them in assigning expiry date for Formulation
3. Demonstrate use of physicochemical properties in evaluation of dosage forms.
4. Appreciate physicochemical properties of drug molecules in formulation research and Development

Course Content:

UNIT-I **10 Hours**

Drug stability: Reaction kinetics: zero, pseudo-zero, first & second order, units of basic rate constants, determination of reaction order. Physical and chemical factors influencing the chemical degradation of pharmaceutical product: temperature, solvent, ionic strength, dielectric constant, specific & general acid base catalysis, Simple numerical problems. Stabilization of medicinal agents against common reactions like hydrolysis & oxidation. Accelerated stability testing in expiration dating of pharmaceutical dosage forms. Photolytic degradation and its prevention

UNIT-II **10 Hours**

Rheology: Newtonian systems, law of flow, kinematic viscosity, effect of temperature, non-Newtonian systems, pseudoplastic, dilatants, plastic, thixotropy, thixotropy in formulation, determination of viscosity, capillary, falling Sphere, rotational viscometers

Deformation of solids: Plastic and elastic deformation, Heckel equation, Stress, Strain, Elastic Modulus

UNIT-III **10 Hours**

Coarse dispersion: Suspension, interfacial properties of suspended particles, settling in suspensions, formulation of suspensions. Emulsions and theories of emulsification, microemulsion and multiple emulsions; Physical stability of emulsions, preservation of emulsions, rheological properties of emulsions, phase equilibria and emulsion formulation.

UNIT-IV **08 Hours**

Surface and interfacial phenomenon: Liquid interface, surface & interfacial tensions,

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surface free energy, measurement of surface & interfacial tensions, spreading coefficient, adsorption at liquid interfaces, surface active agents, HLB Scale, solubilisation, detergency, adsorption at solid interface.

UNIT-V **07 Hours**

Colloidal dispersions: Classification of dispersed systems & their general characteristics, size & shapes of colloidal particles, classification of colloids & comparative account of their general properties. Optical, kinetic & electrical properties. Effect of electrolytes, coacervation, peptization& protective action.

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ADITYA COLLEGE OF PHARMACY SURAMPALEM

FORMULATION AND EVALUATION OF FLOATING MATRIX TABLETS OF CIPROFLOXACIN

Dissertation submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY
KAKINADA

In the partial fulfillment of the requirements for the Award of the degree of

BACHELOR OF PHARMACY

Submitted by

BIKASH KUMAR YADAV (193H1R0069) DHANANJAY YADAV (193H1R0070)

GOVADA VEERA MANI (193H1R0071) GUDDU KUMAR SAH (193H1R0072)

HIMADRI SINHA (193H1R0073)

Under the Guidance of

P. PRASANTHI, M. Pharm.,

Associate Professor,

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APRIL – 2019

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s is to certify that the investigation described in this thesis entitled **"FORMULATION AND ALUATION OF FLOATING MATRIX TABLETS OF CIPROFLOXACIN"** was submitted by **BIKASH MAR YADAV (193H1R0069), DHANANJAY YADAV (193H1R0070), GOVADA VEERA MANI 3H1R0071), GUDDU KUMAR SAH (193H1R0072), HIMADRI SINHA (193H1R0073)** of Aditya llege of Pharmacy (Affiliated to JNTU Kakinada) for the partial fulfillment of Degree of Bachelor Pharmacy in the Department of Pharmaceutics. The report embedded in this thesis was carried out ler the Supervision of **P. PRASANTHI** Associate professor in the Department of Pharmaceutics, itya College of Pharmacy, Surampalem.

Principal,

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BP 405 T.PHARMACOGNOSY AND PHYTOCHEMISTRY I (Theory)

45 Hours

Scope: The subject involves the fundamentals of Pharmacognosy like scope, classification of crude drugs, their identification and evaluation, phytochemicals present in them and their medicinal properties.

Objectives: Upon completion of the course, the student shall be able

1. to know the techniques in the cultivation and production of crude drugs
2. to know the crude drugs, their uses and chemical nature
3. know the evaluation techniques for the herbal drugs
4. to carry out the microscopic and morphological evaluation of crude drugs

Course Content:

UNIT-I **10 Hours**

Introduction to Pharmacognosy:

(a) Definition, history, scope and development of Pharmacognosy

(b) Sources of Drugs – Plants, Animals, Marine & Tissue culture

(c) Organized drugs, unorganized drugs (dried latex, dried juices, dried extracts, gums and mucilages, oleoresins and oleo- gum -resins).

Classification of drugs:

Alphabetical, morphological, taxonomical, chemical, pharmacological, chemo and sero taxonomical classification of drugs

Quality control of Drugs of Natural Origin:

Adulteration of drugs of natural origin. Evaluation by organoleptic, microscopic, physical, chemical and biological methods and properties.

Quantitative microscopy of crude drugs including lycopodium spore method, leafconstants, camera lucida and diagrams of microscopic objects to scale with camera lucida.

UNIT-II **10 Hours**

Cultivation, Collection, Processing and storage of drugs of natural origin:

Cultivation and Collection of drugs of natural origin

Factors influencing cultivation of medicinal plants.

Plant hormones and their applications.

Polyploidy, mutation and hybridization with reference to medicinal plants

Conservation of medicinal plants

UNIT-III **07 Hours**

Plant tissue culture:

Historical development of plant tissue culture, types of cultures, Nutritional requirements, growth and their maintenance.

Applications of plant tissue culture in pharmacognosy.

Edible vaccines

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UNIT IV **10 Hours**

Pharmacognosy in various systems of medicine:

Role of Pharmacognosy in allopathy and traditional systems of medicine namely, Ayurveda, Unani, Siddha, Homeopathy and Chinese systems of medicine.

Introduction to secondary metabolites:

Definition, classification, properties and test for identification of Alkaloids, Glycosides, Flavonoids, Tannins, Volatile oil and Resins

UNIT V **08 Hours**

Study of biological source, chemical nature and uses of drugs of natural origin containing following drugs

Plant Products:

Fibers - Cotton, Jute, Hemp

Hallucinogens, Teratogens, Natural allergens

Primary metabolites:

General introduction, detailed study with respect to chemistry, sources, preparation, evaluation, preservation, storage, therapeutic used and commercial utility as Pharmaceutical Aids and/or Medicines for the following Primary metabolites:

Carbohydrates: Acacia, Agar, Tragacanth, Honey

Proteins and Enzymes : Gelatin, casein, proteolytic enzymes (Papain, bromelain, serratiopeptidase, urokinase, streptokinase, pepsin).

Lipids(Waxes, fats, fixed oils) : Castor oil, Chaulmoogra oil, Wool Fat, Bees Wax

Marine Drugs:

Novel medicinal agents from marine sources

ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM- 533 437

"PRELIMINARY PHYTOCHEMICAL SCREENING AND FORMULATION OF SELECTED FRUIT PEEL EXTRACTS"

Dissertation submitted to

Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the requirements for the degree of Bachelor of Pharmacy

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

SUBMITTED BY

JUJJAVARAPU HEMASATISH (193H1R0074)
JUSTIN THANGSUOLIEN KHOBUNG (193H1R0075)
K. KALPANA (193H1R0076)
KADA RATNAKAR RAO (193H1R0077)
KESHAB RUNGTA (193H1R0078)

UNDER THE GUIDANCE OF

Dr. G Veda Priya, *M. Pharm, Ph. D*

ASSOCIATE PROFESSOR

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Aditya College of Pharmacy
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ADITYA COLLEGE OF PHARMACY

SURAMPALEM - 533437

2022-23

ADITYA COLLEGE OF PHARMACY SURAMPALEM

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LLEGE OF PHARMACY
ved by AICTE & PCI – NEW DELHI, Affiliated to JNTUK, KAKINADA
ly known as Sri Sai Aditya Institute of Pharmaceutical Science & Research)
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CERTIFICATE

s is to certify that the dissertation entitled "Preliminary Phytochemical Screening and rmulation of Selected Fruit Peel Extracts" was submitted to the Jawaharlal Nehru Technological versity, Kakinada in partial fulfillment of the requirements for the award of the degree of chelor of pharmacy is a record of original research work carried out by Jujjavarapu masatish (193H1R0074), Justin Thangsuolien Khobung (193H1R0075), K. lpana (193H1R0076), Kada Ratnakar Rao (193H1R0077), Keshab Rungta 3H1R0078). They have done this research work under the supervision of Dr. G. Veda ya, *M. Pharm* and it has not been previously submitted to any other university or academic titution for any higher degree.

. K. Ravi Shankar, M.*Pharm, Ph.D*
incipal and Professor,
ditya College of Pharmacy,
rampalem- 533437.
ace: Surampalem

ite:

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SURAMPALEM- 533 437

ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM- 533 437

ternal Examiner

ADITYA COLLEGE OF PHARMACY SURAMPALEM

External Examiner

BP 304 T. PHARMACEUTICAL ENGINEERING (Theory)

45 Hours

Scope: This course is designed to impart a fundamental knowledge on the art and science of various unit operations used in pharmaceutical industry.

Objectives: Upon completion of the course student shall be able:

1. To know various unit operations used in Pharmaceutical industries.
2. To understand the material handling techniques.
3. To perform various processes involved in pharmaceutical manufacturing process.
4. To carry out various test to prevent environmental pollution.
5. To appreciate and comprehend significance of plant lay out design for optimum use of resources.
6. To appreciate the various preventive methods used for corrosion control in Pharmaceutical industries.

Course content:

UNIT-I **10 Hours**

- **Flow of fluids:** Types of manometers, Reynolds number and its significance, Bernoulli's theorem and its applications, Energy losses, Orifice meter, Venturimeter, Pitot tube and Rotometer.
- **Size Reduction:** Objectives, Mechanisms & Laws governing size reduction, factors affecting size reduction, principles, construction, working, uses, merits and demerits of Hammer mill, ball mill, fluid energy mill, Edge runner mill & end runner mill.
- **Size Separation:** Objectives, applications & mechanism of size separation, official standards of powders, sieves, size separation Principles, construction, working, uses, merits and demerits of Sieve shaker, cyclone separator, Air separator, Bag filter & elutriation tank.
- **Mixing:** Objectives, applications & factors affecting mixing, Difference between solid and liquid mixing, mechanism of solid mixing, liquids mixing and semisolids mixing. Principles, Construction, Working, uses, Merits and Demerits of Double cone blender, twin shell blender, ribbon blender, Sigma blade mixer, planetary mixers, Propellers, Turbines, Paddles & Silverson Emulsifier.

UNIT-II **10 Hours**

- **Crystallization:** Objectives, applications, & theory of crystallization. Solubility curves, principles, construction, working, uses, merits and demerits of Agitated batch crystallizer, Swenson Walker Crystallizer, Krystal crystallizer, Vacuum crystallizer. Caking of crystals, factors affecting caking & prevention of caking.

- **Evaporation:** Objectives, applications and factors influencing evaporation, differences between evaporation and other heat process. principles, construction, working, uses, merits and demerits of Steam jacketed kettle, horizontal tube evaporator, climbing film evaporator, forced circulation evaporator, multiple effect evaporator& Economy of multiple effect evaporator.
- **Heat Transfer:** Objectives, applications & Heat transfer mechanisms. Fourier's law, Heat transfer by conduction, convection & radiation. Heat interchangers & heat exchangers.

UNIT- III **10 Hours**

- **Drying:** Objectives, applications & mechanism of drying process, measurements & applications of Equilibrium Moisture content, rate of drying curve. principles, construction, working, uses, merits and demerits of Tray dryer, drum dryer spray dryer, fluidized bed dryer, vacuum dryer, freeze dryer.

- **Distillation:** Objectives, applications & types of distillation. principles, construction, working, uses, merits and demerits of (lab scale and industrial scale) Simple distillation, preparation of purified water and water for injection BP by distillation, flash distillation, fractional distillation, distillation under reduced pressure, steam distillation & molecular distillation

UNIT-IV **08 Hours**

- **Filtration:** Objectives, applications, Theories & Factors influencing filtration, filter aids, filter medias. Principle, Construction, Working, Uses, Merits and demerits of plate & frame filter, filter leaf, rotary drum filter, Meta filter & Cartridge filter, membrane filters and Seidtz filter.
- **Centrifugation:** Objectives, principle & applications of Centrifugation, principles, construction, working, uses, merits and demerits of Perforated basket centrifuge, Non-perforated basket centrifuge, semi continuous centrifuge & super centrifuge.

UNIT- V **07 Hours**

- **Plant location, industrial hazards and plant safety:** Plant Layout, utilities and services, Mechanical hazards, Chemical hazards, Fire hazards, explosive hazards and their safety.
- **Materials of pharmaceutical plant construction, Corrosion and its prevention:** Factors affecting during materials selected for Pharmaceutical plant construction, Theories of corrosion, types of corrosion and there prevention. Ferrous and nonferrous metals, inorganic and organic non metals.
- **Material handling systems:** Objectives & applications of Material handling systems, different types of conveyors such as belt, screw and pneumatic conveyors.

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MOLECULAR DOCKING STUDIES OF ACETAMIDO BENZOIC ACID DERIVATIVES AS MmaA1 INHIBITORS FOR TREATMENT OF TUBERCULOSIS

submitted to Dissertation

Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the degree of Bachelor of Pharmacy

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

SUBMITTED BY

KRISHNENDU DAS(193H1R0079)
MEDICHARLA KHASTEEH VENKAT(193H1R0080)
PAPPU MAHATO TATHA(193H1R0051)
PASALA DURGA MALLISWARI(193H1R0052)
PRADIP YADAV(193H1R0053)

Under the Guidance of

S.N.B.VAIDEHI, *M. Pharm*(Ph.D)

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CERTIFICATE

This is to certify that the dissertation entitled **"Molecular Docking Studies of Acetamido Benzoic Acid Derivatives as MmaA1 Inhibitors For Treatment of Tuberculosis"** was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the award of the degree of **Bachelor of pharmacy** is a record of original research work carried out by, **Krishnendu Das (193H1R0079), Medicharla Khantesh Venkat (193H1R0080), Pappu Mahato Tatma (193H1R0081), Pasala Durga Mallishwari (193H1R0082), Pradip Yadav (193H1R0083)**.They have done this research work under the supervision of **B.N.B.Vaidehi, *M. Pharm*,(Ph.D)** and it has not been previously submitted to any other university or academic institution for any higher degree.

Principal,
Dr. K. Ravishankar, M. Pharm, Ph.D
Professor,
Aditya College of Pharmacy,
Surampalem- 533437.

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Internal Examiner

External Examiner

BP606TPHARMACEUTICAL QUALITY ASSURANCE (Theory)

45 Hours

Scope: This course deals with the various aspects of quality control and quality assurance aspects of pharmaceutical industries. It covers the important aspects like cGMP, QC tests, documentation, quality certifications and regulatory affairs.

Objectives: Upon completion of the course student shall be able to:

- understand the cGMP aspects in a pharmaceutical industry
- appreciate the importance of documentation
- understand the scope of quality certifications applicable to pharmaceutical industries
- understand the responsibilities of QA & QC departments

Course content:

UNIT – I **10 Hours**

Quality Assurance and Quality Management concepts: Definition and concept of Quality control, Quality assurance and GMP

Total Quality Management (TQM): Definition, elements, philosophies

ICH Guidelines: purpose, participants, process of harmonization, Brief overview of QSEM, with special emphasis on Q-series guidelines, ICH stability testing guidelines

Quality by design (QbD): Definition, overview, elements of QbD program, tools

ISO 9000 & ISO14000: Overview, Benefits, Elements, steps for registration

NABL accreditation : Principles and procedure

UNIT - II **10 Hours**

Organization and personnel: Personnel responsibilities, training, hygiene and personal records.

Premises: Design, construction and plant layout, maintenance, sanitation, environmental control, utilities and maintenance of sterile areas, control of contamination.

Equipments and raw materials: Equipments selection, purchase specifications, maintenance, purchase specifications and maintenance of stores for raw materials.

UNIT – III **10 Hours**

Quality Control: Quality control test for containers, rubber closures and secondary packing

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materials.

Good Laboratory Practices: General Provisions, Organization and Personnel, Facilities, Equipment, Testing Facilities Operation, Test and Control Articles, Protocol for Conduct of a Nonclinical Laboratory Study, Records and Reports, Disqualification of Testing Facilities

UNIT – IV **08 Hours**

Complaints: Complaints and evaluation of complaints, Handling of return good, recalling and waste disposal.

Document maintenance in pharmaceutical industry: Batch Formula Record, Master Formula Record, SOP, Quality audit, Quality Review and Quality documentation, Reports and documents, distribution records.

UNIT – V **07 Hours**

Calibration and Validation: Introduction, definition and general principles of calibration, qualification and validation, importance and scope of validation, types of validation, validation master plan. Calibration of pH meter, Qualification of UV-Visible spectrophotometer, General principles of Analytical method Validation.

Warehousing: Good warehousing practice, materials management

Recommended Books: (Latest Edition)

1. Quality Assurance Guide by organization of Pharmaceutical Products of India.
2. Good Laboratory Practice Regulations, 2nd Edition, Sandy Weinberg Vol. 69.
3. Quality Assurance of Pharmaceuticals- A compendium of Guide lines and Related materials Vol I WHO Publications.
4. A guide to Total Quality Management- Kushik Maitra and Sedhan K Ghosh
5. How to Practice GMP's – P P Sharma.
6. ISO 9000 and Total Quality Management – Sadhank G Ghosh
7. The International Pharmacopoeia – Vol I, II, III, IV- General Methods of Analysis and Quality specification for Pharmaceutical Substances, Excipients and Dosage forms
8. Good laboratory Practices – Marcel Deckker Series
9. ICH guidelines, ISO 9000 and 14000 guidelines

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STANDARDIZATION AND EVALUATION OF MARKETED HERBAL FORMULATION

Dissertation submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

In the partial fulfilment of the requirements for the Award of the degree of

BACHELOR OF PHARMACY

Submitted by

Rukum Kr.Yadav (193H1R0085) Sayan Bera (193H1R0087)

Soumyadeep Khatua (193H1R0088) Souvik Adak (193H1R0089)

Sumit Khajuria (193H1R0090)

Under the Guidance of

Mrs.N.Divya, M.Pharm

Associate professor, Pharmaceutical Analysis

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ADITYA COLLEGE OF PHARMACY

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2019-2023

ADITYA COLLEGE OF PHARMACY SURAMPALEM

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CERTIFICATE

This is to certify that the investigation described in this thesis entitled **"Standardization and evaluation of marketed herbal formulation"** was submitted by **Rukum Kr. Yadav (193H1R0085), Sayan Bera (193H1R0087), Soumyadeep Khatua (193H1R0088), Sodvik Adak (193H1R0089), Sumit Khajuria (193H1R0090)** of Aditya College of Pharmacy (Affiliated to JNTU Kakinada) for the partial fulfilment of Degree of Bachelor of Pharmacy in the Department of Pharmaceutical Analysis. The report embedded in this thesis was carried out under the Supervision of **Mrs. N. Divya**, Associate professor in the Department of Pharmaceutical Analysis, Aditya College of Pharmacy, Surampalem.

Principal,
Prof. K. Ravi Shankar M.Pharm, Ph.D
Aditya College of Pharmacy,
Surampalem - 533437
East Godavari District, A.P., India

Evaluated by:-

15/3/22

ADITYA COLLEGE OF PHARMACY SURAMPALEM

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SURAMPALEM-533 437

BP 303 T. PHARMACEUTICAL MICROBIOLOGY (Theory)

45Hours

Scope:

- In the broadest sense, scope of microbiology is the study of all organisms that are invisible to the naked eye- that is the study of microorganisms.
- Microorganisms are necessary for the production of bread, cheese, beer, antibiotics, vaccines, vitamins, enzymes etc.
- Microbiology has an impact on medicine, agriculture, food science, ecology, genetics, biochemistry, immunology etc.

Objectives: Upon completion of the subject student shall be able to;

1. Understand methods of identification, cultivation and preservation of various microorganisms
2. Importance of sterilization in microbiology. and pharmaceutical industry
3. Learn sterility testing of pharmaceutical products.
4. Microbiological standardization of Pharmaceuticals.
5. Understand the cell culture technology and its applications in pharmaceutical industries.

Course content:

Unit I **10 Hours**

Introduction, history of microbiology, its branches, scope and its importance.

Introduction to Prokaryotes and Eukaryotes

Study of ultra-structure and morphological classification of bacteria, nutritional requirements, raw materials used for culture media and physical parameters for growth, growth curve, isolation and preservation methods for pure cultures, cultivation of anaerobes, quantitative measurement of bacterial growth (total & viable count).

Study of different types of phase constrast microscopy, dark field microscopy and electron microscopy.

Unit II **10 Hours**

Identification of bacteria using staining techniques (simple, Gram's &Acid fast staining) and biochemical tests (IMViC).

Study of principle, procedure, merits, demerits and applications of Physical, chemical and mechanical method of sterilization.

Evaluation of the efficiency of sterilization methods.

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Equipments employed in large scale sterilization.

Sterility indicators.

Unit III **10 Hours**

Study of morphology, classification, reproduction/replication and cultivation of Fungi and Virus.

Classification and mode of action of disinfectants

Factors influencing disinfection, antiseptics and their evaluation. For bacteriostatic and bactericidal actions

Evaluation of bactericidal & Bacteriostatic.

Sterility testing of products (solids, liquids, ophthalmic and other sterile products) according to IP, BP and USP.

Unit IV **08 Hours**

Designing of aseptic area, laminar flow equipments; study of different sources of contamination in an aseptic area and methods of prevention, clean area classification.

Principles and methods of different microbiological assay. Methods for standardization of antibiotics, vitamins and amino acids.

Assessment of a new antibiotic and testing of antimicrobial activity of a new substance.

General aspects-environmental cleanliness.

Unit V **07Hours**

Types of spoilage, factors affecting the microbial spoilage of pharmaceutical products, sources and types of microbial contaminants, assessment of microbial contamination and spoilage.

Preservation of pharmaceutical products using antimicrobial agents, evaluation of microbial stability of formulations.

Growth of animal cells in culture, general procedure for cell culture, Primary, established and transformed cell cultures.

Application of cell cultures in pharmaceutical industry and research.

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"FORMULATION AND EVALUATION OF TRANSDERMAL PATCHES CONTAINING MEMANTINE HYDROCHLORIDE"

Dissertation submitted to

Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the requirements for the degree of Bachelor of Pharmacy

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

SUBMITTED BY

SUMIT KUMAR GUPTA (193H1R0091)

SUNNY KUMAR (193H1R0092)

TAYIB AHMAD NAIK (193H1R0093)

TEEPARTHI RANJITH KUMAR (193H1R0094)

VAKACHARLA SAI PRASANNA (193H1R0096)

UNDER THE GUIDANCE OF

S. Prakash Nathaniel Kumar, *M. Pharm.*

Assoc. Professor.

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2022-23

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This is to certify that the dissertation entitled "FORMULATION AND EVALUATION OF TRANSDERMAL PATCHES CONTAINING MEMANTINE HYDROCHLORIDE" was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the award of the degree of **Bachelor of pharmacy** is a record of original research work carried out by SUMIT KUMAR GUPTA (193H1R0091), SUNNY KUMAR (193H1R0092), TAYIB AHMAD NAIK (193H1R0093), TEEPARTHI RANJITH KUMAR (193H1R0094), VAKACHARLA SAI PRASANNA (193H1R0096). They have done this research work under the supervision of Mr. Sarella Prakash Nathaniel Kumar, *M. Pharm* and it has not been previously submitted to any other university or academic institution for any higher degree.

Dr. K. Ravishankar, *M.Pharm, Ph.D*

Principal and Professor,

Aditya College of Pharmacy,

Surampalem- 533437.

Place: Surampalem

Date:

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Internal Examiner

External Examiner

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BP504 T. PHARMACOGNOSY AND PHYTOCHEMISTRY II (Theory)

45Hours

Scope: The main purpose of subject is to impart the students the knowledge of how the secondary metabolites are produced in the crude drugs, how to isolate and identify and produce them industrially. Also this subject involves the study of producing the plants and phytochemicals through plant tissue culture, drug interactions and basic principles of traditional system of medicine

Objectives: Upon completion of the course, the student shall be able

1. to know the modern extraction techniques, characterization and identification of the herbal drugs and phytoconstituents
2. to understand the preparation and development of herbal formulation.
3. to understand the herbal drug interactions
4. to carryout isolation and identification of phytoconstituents

Course Content:

UNIT-I **7 Hours**

Metabolic pathways in higher plants and their determination

a) Brief study of basic metabolic pathways and formation of different secondary metabolites through these pathways- Shikimic acid pathway, Acetate pathways and Amino acid pathway.
b) Study of utilization of radioactive isotopes in the investigation of Biogenetic studies.

UNIT-II **14 Hours**

General introduction, composition, chemistry & chemical classes, biosources, therapeutic uses and commercial applications of following
secondary metabolites:

Alkaloids: Vinca, Rauwolfia, Belladonna, Opium,
Phenylpropanoids and Flavonoids: Lignans, Tea, Ruta
Steroids, Cardiac Glycosides & Triterpenoids: Liquorice, Dioscorea, Digitalis
Volatile oils: Mentha, Clove, Cinnamon, Fennel, Coriander,
Tannins: Catechu, Pterocarpus
Resins: Benzoin, Guggul, Ginger, Asafoetida, Myrrh, Colophony
Glycosides: Senna, Aloes, Bitter Almond
Iridoids, Other terpenoids & Naphthaquinones: Gentian, Artemisia, taxus, carotenoids

UNIT-III **06 Hours**

Isolation, Identification and Analysis of Phytoconstituents

a) Terpenoids: Menthol, Citral, Artemisin
b) Glycosides: Glycyrhetinic acid & Rutin
c) Alkaloids: Atropine,Quinine,Reserpine,Caffeine
d) Resins: Podophyllotoxin, Curcumin

UNIT-IV **10 Hours**

Industrial production, estimation and utilization of the following phytoconstituents: Forskolin, Sennoside, Artemisinin, Diosgenin, Digoxin, Atropine, Podophyllotoxin, Caffeine, Taxol, Vincristine and Vinblastine

UNIT V **8 Hours**

Basics of Phytochemistry

Modern methods of extraction, application of latest techniques like Spectroscopy, chromatography and electrophoresis in the isolation, purification and identification of crude drugs.

PRELIMINARY PHYTOCHEMICAL SCREENING AND ANALGESIC ACTIVITY OF ETHANOLIC ROOT EXTRACT OF PAEDERIAFOETIDA

Dissertation submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

In the partial fulfillment of the requirements for the Award of the degree of

BACHELOR OF PHARMACY

Submitted by

Under the Guidance of

Assistant Professor

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APRIL – 2023

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This is to certify that the investigation described in this thesis entitled "**Preliminary Phytochemical Screening and Analgesic Activity of Ethanolic Root Extract of *Paederia Foetida***" wassubmitted by [redacted] of Aditya College of Pharmacy(Affiliated to JNTU Kakinada) for the Partial fulfillment of Degree of Bachelor of Pharmacy in the Department of Pharmacology. The Report embedded in this thesis was carried out under the Guidance of K.SRUTHI, M.Pharm., Assistant Professor of Department of Pharmacology of Aditya College Of Pharmacy, Surampalem.

Principal,
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Place: Surampalem
Date:

Internal Examiner

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External Examiner

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BP408 P. PHARMACOGNOSY AND PHYTOCHEMISTRY I (Practical)

4 Hours/Week

1. Analysis of crude drugs by chemical tests: (i)Tragaccanth (ii) Acacia (iii)Agar (iv) Gelatin (v) starch (vi) Honey (vii) Castor oil
2. Determination of stomatal number and index
3. Determination of vein islet number, vein islet termination and paliside ratio.
4. Determination of size of starch grains, calcium oxalate crystals by eye piece micrometer
5. Determination of Fiber length and width
6. Determination of number of starch grains by Lycopodium spore method
7. Determination of Ash value
8. Determination of Extractive values of crude drugs
9. Determination of moisture content of crude drugs
10. Determination of swelling index and foaming

Recommended Books: (Latest Editions)

1. W.C.Evans, Trease and Evans Pharmacognosy, 16th edition, W.B. Sounders & Co., London, 2009.
2. Tyler, V.E., Brady, L.R. and Robbers, J.E., Pharmacognosy, 9th Edn., Lea and Febiger, Philadelphia, 1988.
3. Text Book of Pharmacognosy by T.E. Wallis
4. Mohammad Ali. Pharmacognosy and Phytochemistry, CBS Publishers & Distribution, New Delhi.
5. Text book of Pharmacognosy by C.K. Kokate, Purohit, Gokhlae (2007), 37th Edition, Nirali Prakashan, New Delhi.
6. Herbal drug industry by R.D. Choudhary (1996), Ist Edn, Eastern Publisher, New Delhi.
7. Essentials of Pharmacognosy, Dr.SH.Ansari, IInd edition, Birla publications, New Delhi, 2007
8. Practical Pharmacognosy: C.K. Kokate, Purohit, Gokhlae
9. Anatomy of Crude Drugs by M.A. Iyengar

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ANTI-NOCICEPTIVE ACTIVITY OF METHANOLIC EXTRACT OF *MELOCHIA CORCHORIFOLIA*

Dissertation submitted to

Jawaharlal Nehru Technological University, Kakinada in partial fulfilmentof the requirements for the degree of Bachelor of Pharmacy

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Under the Guidance of

Dr.K.Ravi Shankar M.Pharm, Ph.D

Principal

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This is to certify that the dissertation entitled "ANTI-NOCICEPTIVE ACTIVITY OF METHANOLIC EXTRACT OF *MELOCHIA CORCHORIFOLIA*" was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the award of the degree of **Bachelor of pharmacy** is a record of original research work carried out by V M GANESH(193H1R00A24), DONEPALLI SOMESWARI(193H1R00A4), MALLIDI MEGHANA(193H1R00A41), J N AMRICA(193H1R00A5[illegible]), YALLA KARUNA (193H1R00A6), They have done this research work under the supervision of Dr.K.Ravi Shankar *M. Pharm, Ph.D* and it has not been previously submitted to any other university or academic institution for any higher degree.

ADITYA COLLEGE OF PHARMACY SURAMPALEM

Dr. K. Ravi Shankar, *M.Pharm, Ph.D*
Principal and Professor,
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Place: Surampalem
Date:

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External Examiner

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8. Introduction to Organic Laboratory techniques by Pavia, Lampman and Kriz.

BP302T. PHYSICAL PHARMACEUTICS-I (Theory)

45Hours

Scope: The course deals with the various physical, physicochemical properties and principle involved in dosage forms, formulations. Theory and practical components of the subject help the student to get a better insight in to various areas of formulation research and development and stability studies of pharmaceuticals.

Objectives: Upon the completion of the course student shall be able to

1. Understand various physicochemical properties of drug molecules in the designing the dosage form
2. Know the principles of chemical kinetics & to use them in assigning expiry date for formulation
3. Demonstrate use of physicochemical properties in evaluation of dosage forms.
4. Appreciate physicochemical properties of drug molecules in formulation research and development

Course Content:

UNIT-I **10 Hours**

Solubility of drugs: Solubility expressions, mechanisms of solute solvent interactions, ideal solubility parameters, solvation & association, quantitative approach to the factors influencing solubility of drugs, Dissolution & drug release, diffusion principles in biological systems. Solubility of gas in liquids, solubility of liquids in liquids, (Binary solutions, ideal solutions) Raoult's law, real solutions, azeotropic mixtures, fractional distillation. Partially miscible liquids, Critical solution temperature and applications. Distribution law, its limitations and applications

UNIT-II **10Hours**

States of Matter and properties of matter: State of matter, changes in the state of matter, latent heats, vapour pressure, sublimation critical point, eutectic mixtures, gases, aerosols – inhalers, relative humidity, liquid complexes, liquid crystals, glassy states, solid-crystalline, amorphous & polymorphism.

Physicochemical properties of drug molecules: Refractive index, optical rotation, dielectric constant, dipole moment, dissociation constant, determinations and applications

UNIT-III **10Hours**

Micromeretics: Particle size and distribution, average particle size, number and weight distribution, particle number, methods for determining particle size by (different methods), counting and separation method, particle shape, specific surface, methods for determining surface area, permeability, adsorption, derived properties of powders,

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porosity, packing arrangement, densities, bulkiness & flow properties.

UNIT-IV **08Hours**

Complexation and protein binding: Introduction, Classification of Complexation, Applications, methods of analysis, protein binding, Complexation and drug action, crystalline structures of complexes and thermodynamic treatment of stability constants.

UNIT-V **07 Hours**

pH, buffers and Isotonic solutions: Sorensen's pH scale, pH determination (electrometric and calorimetric), applications of buffers, buffer equation, buffer capacity, buffers in pharmaceutical and biological systems, buffered isotonic solutions.

FORMULATION AND EVALUATION OF METRONIDAZOLE SUSTAINED RELEASE FLOATING TABLETS

DISSERTATION SUBMITTED TO

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

THE PARTIAL FULLFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF

BACHELOR OF PHARMACY

Submitted by

Punam Kumari Gupta (193H1R00A7) Niraj Kumar Gaund (193H1R00A8)

Ajay Kumar Yadav (193H1R00A9) Radhe Krishna Kushwaha (193H1R00B0)

Ramnath Ray (193H1R00B1)

UNDER THE GUIDANCE OF

T.PRASANTHI M.PHARM (Ph.D)

Assistant professor

Aditya College of Pharmacy

ADITYA COLLEGE OF PHARMACY

SURAMPALEM – 533437

APRIL - 2023

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proved by AICTE & PCI – NEW DELHI, Affiliated to JNTU KAKINADA
rmerly known as Sri Sai Aditya Institute of Pharmaceutical Science & Research)

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CERTIFICATE

This is to certify that the dissertation work entitled **FORMULATION AND EVALUATION OF METRONIDAZOLE SUSTAINED RELEASE FLOATING TABLETS** is submitted to the JNT University, Kakinada in partial fulfillment for the award of the degree of bachelor of pharmacy. This is a bonafied work carried out by *Pawan Kumari Gupta (193H1R00A7), Niraj Kumar Gaund (193H1R00AR), Ajay Kumar Yadav (193H1R00A9), Radhe Krishna Kushwaha (193H1R00B0), Ramnath Ray (193H1R00B1)* under the guidance and supervision of Mrs. TELLA PRASANTHI M. Pharm (Ph.D) Assistant professor, (DEPARTMENT OF PHARMACEUTICAL TECHNOLOGY).

PLACE: SURAMPALEM

DATE:

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DR.K.RAVI SHANKAR

M. PHARM, Ph. D

Aditya College of Pharmacy

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T. Prasanthi
Internal Examiner

External Examiner

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BP103T. PHARMACEUTICS- I (Theory)

45 Hours

Scope: This course is designed to impart a fundamental knowledge on the preparatory pharmacy with arts and science of preparing the different conventional dosage forms.

Objectives: Upon completion of this course the student should be able to:

- Know the history of profession of pharmacy
- Understand the basics of different dosage forms, pharmaceutical incompatibilities and pharmaceutical calculations
- Understand the professional way of handling the prescription
- Preparation of various conventional dosage forms

Course Content:

UNIT – I **10 Hours**

- **Historical background and development of profession of pharmacy**: History of profession of Pharmacy in India in relation to pharmacy education, industry and organization, Pharmacy as a career, Pharmacopoeias: Introduction to IP, BP, USP and Extra Pharmacopoeia.
- **Dosage forms:** Introduction to dosage forms, classification and definitions
- **Prescription:** Definition, Parts of prescription, handling of Prescription and Errors in prescription.
- **Posology:** Definition, Factors affecting posology. Pediatric dose calculations based on age, body weight and body surface area.

UNIT – II **10 Hours**

- **Pharmaceutical calculations**: Weights and measures – Imperial & Metric system, Calculations involving percentage solutions, alligation, proof spirit and isotonic solutions based on freezing point and molecular weight.

- **Powders:** Definition, classification, advantages and disadvantages,Simple & compound powders – official preparations, dusting powders, effervescent, efflorescent and hygroscopic powders, eutectic mixtures. Geometric dilutions.

- **Liquid dosage forms:** Advantages and disadvantages of liquid dosage forms. Excipients used in formulation of liquid dosage forms. Solubility enhancement techniques

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Formation and utilization of ketone bodies; ketoacidosis

De novo synthesis of fatty acids (Palmitic acid)

Biological significance of cholesterol and conversion of cholesterol into bile acids, steroid hormone and vitamin D

Disorders of lipid metabolism: Hypercholesterolemia, atherosclerosis, fatty liver and obesity.

- **Amino acid metabolism**

General reactions of amino acid metabolism: Transamination, deamination & decarboxylation, urea cycle and its disorders

Catabolism of phenylalanine and tyrosine and their metabolic disorders (Phenyketonuria, Albinism, alkeptonuria, tyrosinemia)

Synthesis and significance of biological substances; 5-HT, melatonin, dopamine, noradrenaline, adrenaline

Catabolism of heme; hyperbilirubinemia and jaundice

UNIT III **10 Hours**

- **Nucleic acid metabolism and genetic information transfer**

Biosynthesis of purine and pyrimidine nucleotides

Catabolism of purine nucleotides and Hyperuricemia and Gout disease

Organization of mammalian genome

Structure of DNA and RNA and their functions

DNA replication (semi conservative model)

Transcription or RNA synthesis

Genetic code, Translation or Protein synthesis and inhibitors

UNIT IV **08 Hours**

- **Biomolecules**

Introduction, classification, chemical nature and biological role of carbohydrate, lipids, nucleic acids, amino acids and proteins.

- **Bioenergetics**

Concept of free energy, endergonic and exergonic reaction, Relationship between free energy, enthalpy and entropy; Redox potential.

Energy rich compounds; classification; biological significances of ATP and cyclic AMP

UNIT – III **08 Hours**

- **Monophasic liquids:** Definitions and preparations of Gargles, Mouthwashes, Throat Paint, Eardrops, Nasal drops, Enemas, Syrups, Elixirs, Liniments and Lotions.
- **Biphasic liquids:**
- **Suspensions:** Definition, advantages and disadvantages, classifications, Preparation of suspensions; Flocculated and Deflocculated suspension & stability problems and methods to overcome.
- **Emulsions:** Definition, classification, emulsifying agent, test for the identification of type ofEmulsion, Methods of preparation & stability problems and methods to overcome.

UNIT – IV **08 Hours**

- **Suppositories**: Definition, types, advantages and disadvantages, types of bases, methods of preparations. Displacement value & its calculations, evaluation of suppositories.
- **Pharmaceutical incompatibilities**: Definition, classification, physical, chemical and therapeutic incompatibilities with examples.

UNIV – V **07 Hours**

- **Semisolid dosage forms:** Definitions, classification, mechanisms and factors influencing dermal penetration of drugs. Preparation of ointments, pastes, creams and gels. Excipients used in semi solid dosage forms. Evaluation of semi solid dosages forms

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FORMULATION AND EVALUATION OF FAST DISINTEGRATING TABLETS OF AMLODIPINE BESYLATE BY USING FENUGREEK SEED MUCILAGE.

Dissertation submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY,

KAKINADA

In the partial fulfilment of the requirement for the award of the degree of

: BACHELOR OF PHARMACY :

Submitted by

ARUN BAHARDAR (193H1R00B2) FATIMA JOHRA (193H1R00B3)

BIKRAM PANDEY (193H1R00B4) ARATI KUMARI MAJHI (193H1R00B5)

NIRAJ KUMAR SAH (193H1R00B6)

UNDER THE GUIDANCE OF

A. SWETHA M. Pharm.

Assistant professor

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SURAMPALEM – 533437

APP

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This is to certify that the dissertation work entitled FORMULATION AND EVALUATION OF FAST DISINTEGRATING TABLETS OF AMLODIPINE BESYLATE BY USING FENUGREEK SEED MUCILAGE was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the award of the degree of **Bachelor of Pharmacy** is a record of original research work carried out by Arun Bahardar (193H1R00B2), Fathima Jahra (193H1R00B3), Bikram Pandey (193H1R00B4), Aruti kumari Majhi (193H1R00B5), Niraj kumar Sah (193H1R00B6). They have done this research work under the supervision of Mrs. A.Swetha, *M.Pharm* Assistant Professor, (Department of Pharmaceutical Technology) and it has not been previously submitted to any other university or academic institution for any higher degree.

Dr. K. Ravishankar, M.Pharm, Ph.D
Principal and Professor,
Aditya College of Pharmacy,
Surampalem- 533437.
Place: Surampalem
Date:

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A. Swetha
Internal Examiner

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BP 811 ET. ADVANCED INSTRUMENTATION TECHNIQUES

45 Hours

Scope: This subject deals with the application of instrumental methods in qualitative and quantitative analysis of drugs. This subject is designed to impart advanced knowledge on the principles and instrumentation of spectroscopic and chromatographic hyphenated techniques. This also emphasizes on theoretical and practical knowledge on modern analytical instruments that are used for drug testing.

Objectives: Upon completion of the course the student shall be able to

- understand the advanced instruments used and its applications in drug analysis
- understand the chromatographic separation and analysis of drugs.
- understand the calibration of various analytical instruments
- know analysis of drugs using various analytical instruments.

Course Content:

UNIT-I **10 Hours**

Nuclear Magnetic Resonance spectroscopy

Principles of H-NMR and C-NMR, chemical shift, factors affecting chemical shift, coupling constant, Spin - spin coupling, relaxation, instrumentation and applications

Mass Spectrometry- Principles, Fragmentation, Ionization techniques – Electron impact, chemical ionization, MALDI, FAB, Analyzers-Time of flight and Quadrupole, instrumentation, applications

UNIT-II **10 Hours**

Thermal Methods of Analysis: Principles, instrumentation and applications of ThermogravimetricAnalysis (TGA), Differential Thermal Analysis (DTA), Differential Scanning Calorimetry (DSC)

X-Ray Diffraction Methods: Origin of X-rays, basic aspects of crystals, X-ray

Crystallography, rotating crystal technique, single crystal diffraction,powder diffraction, structural elucidation and applications.

UNIT-III **10 Hours**

Calibration and validation-as per ICH and USFDA guidelines

Calibration of following Instruments

Electronic balance, UV-Visible spectrophotometer, IR spectrophotometer.

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Fluorimeter, Flame Photometer, HPLC and GC

UNIT-IV **08 Hours**

Radio immune assay: Importance, various components, Principle, different methods, Limitation and Applications of Radio immuno assay

Extraction techniques:General principle and procedure involved in the solid phase extraction and liquid-liquid extraction

UNIT-V **07 Hours**

Hyphenated techniques-LC-MS/MS, GC-MS/MS, HPTLC-MS.

Recommended Books (Latest Editions)

1. Instrumental Methods of Chemical Analysis by B.K Sharma
2. Organic spectroscopy by Y.R Sharma
3. Text book of Pharmaceutical Analysis by Kenneth A. Connors
4. Vogel's Text book of Quantitative Chemical Analysis by A.I. Vogel
5. Practical Pharmaceutical Chemistry by A.H. Beckett and J.B. Stenlake
6. Organic Chemistry by I. L. Finar
7. Organic spectroscopy by William Kemp
8. Quantitative Analysis of Drugs by D. C. Garrett
9. Quantitative Analysis of Drugs in Pharmaceutical Formulations by P. D. Sethi
10. Spectrophotometric identification of Organic Compounds by Silverstein

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INVITRO ANTHELMINTIC ACTIVITY OF COMBINATION OF FLOWERS, ROOTS OF *LANTANA CAMARA* AND SEEDS OF *ANNONA SQUAMOSA* EXTRACT ON INDIAN EARTH WORMS

Dissertation submitted to

Jawaharlal Nehru Technological University, Kakinada in partial fulfillmentof the requirements for the degree of Bachelor of Pharmacy

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

Shyam Manohar Shah	(193H1R00B7)
Tallapudi Leela Sri Venkata Durga	(203H5R0001)
Padala Veeravenkata Sivaji	(203H5R0002)

UNDER THE GUIDANCE OF

Mrs. SWATHI SUDDALA

Associate Professor

Aditya College of Pharmacy

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APRIL-2023

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CERTIFICATE

This is to certify that the dissertation work entitled INVITRO ANTHELMINTIC ACTIVITY OF COMBINATION OF FLOWERS, ROOTS OF *LANTANA CAMARA* AND SEEDS OF *ANNONA SQUAMOSA* EXTRACTS ON INDIAN EARTH WORMS is submitted to the JNT University, Kakinada in partial fulfillment for the award of the degree of bachelor of pharmacy. This is a bonafied work carried out by *Shyam Manohar Singh (193H1R0087), Tallapudi Lokka Sri Venkata Durga (203H5R0001), Padala Veeravenkata Siva (203H5R0002)* under the guidance and supervision of Mrs. SWATHI SUDDALA M. Pharm Associate Professor, (DEPARTMENT OF PHARMACOGNOSY).

Dr.K. Ravi Shankar, M.Pharm, Ph.D
Principal and Professor,
Aditya College of Pharmacy,
Surampalem-533437.

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Place: Surampalem
Date:

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BP102T. PHARMACEUTICAL ANALYSIS (Theory)

45 Hours

Scope: This course deals with the fundamentals of analytical chemistry and principles of electrochemical analysis of drugs

Objectives: Upon completion of the course student shall be able to

- understand the principles of volumetric and electro chemical analysis
- carryout various volumetric and electrochemical titrations
- develop analytical skills

Course Content:

UNIT-I **10 Hours**

(a) Pharmaceutical analysis- Definition and scope

i) Different techniques of analysis

ii) Methods of expressing concentration

iii) Primary and secondary standards.

iv) Preparation and standardization of various molar and normal solutions- Oxalic acid, sodium hydroxide, hydrochloric acid, sodium thiosulphate, sulphuric acid, potassium permanganate and ceric ammonium sulphate

(b)Errors: Sources of errors, types of errors, methods of minimizing errors, accuracy, precision and significant figures

UNIT-II **10 Hours**

- **Acid base titration**: Theories of acid base indicators, classification of acid base titrations and theory involved in titrations of strong, weak, and very weak acids and bases, neutralization curves
- **Non aqueous titration:** Solvents, acidimetry and alkalimetry titration and estimation of Sodium benzoate and Ephedrine HCl

UNIT-III **10 Hours**

- **Precipitation titrations**: Mohr's method, Volhard's, Modified Volhard's, Fajans method, estimation of sodium chloride.
- **Complexometric titration**: Classification, metal ion indicators, masking and demasking reagents, estimation of Magnesium sulphate, and calcium gluconate.
- **Gravimetry**: Principle and steps involved in gravimetric analysis. Purity of the precipitate: co-precipitation and post precipitation, Estimation of barium sulphate.

UNIT-IV **08 Hours**

Redox titrations

(a) Concepts of oxidation and reduction

(b) Types of redox titrations (Principles and applications)

Cerimetry, Iodimetry, Iodometry, Bromatometry, Dichrometry, Titration with potassium iodate

UNIT-V **07 Hours**

- **Electrochemical methods of analysis**
  - **Conductometry**- Introduction, Conductivity cell, Conductometric titrations, applications.
  - **Potentiometry** - Electrochemical cell, construction and working of reference (Standard hydrogen, silver chloride electrode and calomel electrode) and indicator electrodes (metal electrodes and glass electrode), methods to determine end point of potentiometric titration and applications.
  - **Polarography** - Principle, Ilkovic equation, construction and working of dropping mercury electrode and rotating platinum electrode, applications

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Analog Labs
Analytical Testing Laboratory & Training Centre

Date: 02-06-2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **ALLURI NALINI (Regd No: 193H1R0001)** is a student of B.Pharmacy in **ADITYA COLLEGE OF PHARMACY**, Surampalem, has successfully completed an INDUSTRIAL TRAINING in the field of Analytical Research and Development from 02-05-2023 to 02-06-2023 under our guidance.

During the period of her industrial program with us, she had been exposed to different processes and was found diligent, hardworking and inquisitive.

We wish her every success in her life and career

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AUTHORISED SIGNATORY

K. Anupama Reddy *M.Sc. Anal.chem., PGDCAQM, MBA*

Director

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E-mail:analoglbs@gmail.com, Website : www.analoglabs.co.in

BP301T. PHARMACEUTICAL ORGANIC CHEMISTRY –II (Theory)

45 Hours

Scope: This subject deals with general methods of preparation and reactions of some organic compounds. Reactivity of organic compounds are also studied here. The syllabus emphasizes on mechanisms and orientation of reactions. Chemistry of fats and oils are also included in the syllabus.

Objectives: Upon completion of the course the student shall be able to

1. write the structure, name and the type of isomerism of the organic compound
2. write the reaction, name the reaction and orientation of reactions
3. account for reactivity/stability of compounds,
4. prepare organic compounds

Course Content:

General methods of preparation and reactions of compounds superscripted with asterisk (*) to be explained

To emphasize on definition, types, classification, principles/mechanisms, applications, examples and differences

UNIT I **10 Hours**

- **Benzene and its derivatives**
  - **A.** Analytical, synthetic and other evidences in the derivation of structure of benzene, Orbital picture, resonance in benzene, aromatic characters, Huckel's rule
  - **B.** Reactions of benzene - nitration, sulphonation, halogenation-reactivity, Friedelcrafts alkylation- reactivity, limitations, Friedelcrafts acylation.
  - **C.** Substituents, effect of substituents on reactivity and orientation of mono substituted benzene compounds towards electrophilic substitution reaction
  - **D.** Structure and uses of DDT, Saccharin, BHC and Chloramine

UNIT II **10 Hours**

- **Phenols*** - Acidity of phenols, effect of substituents on acidity, qualitative tests, Structure and uses of phenol, cresols, resorcinol, naphthols
- **Aromatic Amines*** - Basicity of amines, effect of substituents on basicity, and synthetic uses of aryl diazonium salts

UNIT III **10 Hours**

- **Fats and Oils**
  a. Fatty acids – reactions.

b. Hydrolysis, Hydrogenation, Saponification and Rancidity of oils, Drying oils.
c. Analytical constants – Acid value, Saponification value, Ester value, Iodine value, Acetyl value, Reichert Meissl (RM) value – significance and principle involved in their determination.

UNIT IV **08 Hours**

- **Polynuclear hydrocarbons:**

a. Synthesis, reactions
b. Structure and medicinal uses of Naphthalene, Phenanthrene, Anthracene, Diphenylmethane, Triphenylmethane and their derivatives

UNIT V **07 Hours**

- **Cyclo alkanes^**

Stabilities – Baeyer's strain theory, limitation of Baeyer's strain theory, Coulson and Moffitt's modification, Sachse Mohr's theory (Theory of strainless rings), reactions of cyclopropane and cyclobutane only

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Date: 02-06-2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **GUBBALA SONY MAHESH VARDHANI (Regd No: 193H1R0015)** is a student of B.Pharmacy in **ADITYA COLLEGE OF PHARMACY,** Surampalem, has successfully completed an INDUSTRIAL TRAINING in the field of Analytical Research and Development from 02-05-2023 to 02-06-2023 under our guidance.

During the period of her industrial program with us, she had been exposed to different processes and was found diligent, hardworking and inquisitive.

We wish her every success in her life and career

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AUTHORISED SIGNATORY

K. Anupama-reddy *M.Sc. Anal.chem., PGDCAQM, MBA*

Director

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BP701T. INSTRUMENTAL METHODS OF ANALYSIS (Theory)

45 Hours

Scope: This subject deals with the application of instrumental methods in qualitative and quantitative analysis of drugs. This subject is designed to impart a fundamental knowledge on the principles and instrumentation of spectroscopic and chromatographic technique. This also emphasizes on theoretical and practical knowledge on modern analytical instruments that are used for drug testing.

Objectives: Upon completion of the course the student shall be able to

1. Understand the interaction of matter with electromagnetic radiations and its applications in drug analysis
2. Understand the chromatographic separation and analysis of drugs.
3. Perform quantitative & qualitative analysis of drugs using various analytical instruments.

Course Content:

UNIT –I **10 Hours**

UV Visible spectroscopy

Electronic transitions, chromophores, auxochromes, spectral shifts, solvent effect on absorption spectra, Beer and Lambert's law, Derivation and deviations.

Instrumentation - Sources of radiation, wavelength selectors, sample cells, detectors- Photo tube, Photomultiplier tube, Photo voltaic cell, Silicon Photodiode.

Applications - Spectrophotometric titrations, Single component and multi component analysis

Fluorimetry

Theory, Concepts of singlet, doublet and triplet electronic states, internal and external conversions, factors affecting fluorescence, quenching, instrumentation and applications

UNIT –II **10 Hours**

IR spectroscopy

Introduction, fundamental modes of vibrations in poly atomic molecules, sample handling, factors affecting vibrations

Instrumentation - Sources of radiation, wavelength selectors, detectors - Golay cell, Bolometer, Thermocouple, Thermister, Pyroelectric detector and applications

Flame Photometry-Principle, interferences, instrumentation and applications

Atomic absorption spectroscopy- Principle, interferences, instrumentation and applications

Nepheloturbidometry- Principle, instrumentation and applications

UNIT –III **10 Hours**

Introduction to chromatography

Adsorption and partition column chromatography-Methodology, advantages, disadvantages and applications.

Thin layer chromatography- Introduction, Principle, Methodology, Rf values, advantages, disadvantages and applications.

Paper chromatography-Introduction, methodology, development techniques, advantages, disadvantages and applications

Electrophoresis– Introduction, factors affecting electrophoretic mobility, Techniques of paper, gel, capillary electrophoresis, applications

UNIT –IV **08 Hours**

Gas chromatography - Introduction, theory, instrumentation, derivatization, temperature programming, advantages, disadvantages and applications

High performance liquid chromatography (HPLC)-Introduction, theory, instrumentation, advantages and applications.

UNIT –V **07 Hours**

Ion exchange chromatography- Introduction, classification, ion exchange resins, properties, mechanism of ion exchange process, factors affecting ion exchange, methodology and applications

Gel chromatography- Introduction, theory, instrumentation and applications

Affinity chromatography- Introduction, theory, instrumentation and applications

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Date: 09-06-2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **BANDE NAGA GANGA RAO (Regd No: 193H1R0066)** is a student of B.Pharmacy in **ADITYA COLLEGE OF PHARMACY**, Surampalem, has successfully completed an INDUSTRIAL TRAINING in the field of Analytical Research and Development from 09-05-2023 to 09-06-2023 under our guidance.

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K. Anupama reddy *M.Sc. Anal.chem., PGDCAQM, MBA*

Director

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BP 703T. PHARMACY PRACTICE (Theory)

45 Hours

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 information, and therapeutic drug monitoring for improved patient care. In community pharmacy, students will be learning various skills such as dispensing of drugs, responding to minor ailments by providing suitable safe medication, patient counselling for improved patient care in the community set up.

Objectives: Upon completion of the course, the student shall be able to

1. know various drug distribution methods in a hospital
2. appreciate the pharmacy stores management and inventory control
3. monitor drug therapy of patient through medication chart review and clinical review
4. obtain medication history interview and counsel the patients
5. identify drug related problems
6. detect and assess adverse drug reactions
7. interpret selected laboratory results (as monitoring parameters in therapeutics) of specific disease states
8. know pharmaceutical care services
9. do patient counseling in community pharmacy;
10. appreciate the concept of Rational drug therapy.

Unit I: **10 Hours**

a) Hospital and it's organization

Definition, Classification of hospital- Primary, Secondary and Tertiary hospitals, Classification based on clinical and non- clinical basis, Organization Structure of a Hospital, and Medical staffs involved in the hospital and their functions.

b) Hospital pharmacy and its organization

Definition, functions of hospital pharmacy, Organization structure, Location, Layout and staff requirements, and Responsibilities and functions of hospital pharmacists.

c) Adverse drug reaction

Classifications - Excessive pharmacological effects, secondary pharmacological effects, idiosyncrasy, allergic drug reactions, genetically determined toxicity, toxicity following sudden withdrawal of drugs, Drug interaction- beneficial interactions, adverse interactions, and pharmacokinetic drug interactions, Methods for detecting

drug interactions, spontaneous case reports and record linkage studies, and Adverse drug reaction reporting and management.

d) Community Pharmacy

Organization and structure of retail and wholesale drug store, types and design, Legal requirements for establishment and maintenance of a drug store, Dispensing of proprietary products, maintenance of records of retail and wholesale drug store.

Unit II: **10 Hours**

a) Drug distribution system in a hospital

Dispensing of drugs to inpatients, types of drug distribution systems, charging policy and labelling, Dispensing of drugs to ambulatory patients, and Dispensing of controlled drugs.

b) Hospital formulary

Definition, contents of hospital formulary, Differentiation of hospital formulary and Drug list, preparation and revision, and addition and deletion of drug from hospital formulary.

c) Therapeutic drug monitoring

Need for Therapeutic Drug Monitoring, Factors to be considered during the Therapeutic Drug Monitoring, and Indian scenario for Therapeutic Drug Monitoring.

d) Medication adherence

Causes of medication non-adherence, pharmacist role in the medication adherence, and monitoring of patient medication adherence.

e) Patient medication history interview

Need for the patient medication history interview, medication interview forms.

f) Community pharmacy management

Financial, materials, staff, and infrastructure requirements.

Unit III: **10 Hours**

a) Pharmacy and therapeutic committee

Organization, functions, Policies of the pharmacy and therapeutic committee in including drugs into formulary, inpatient and outpatient prescription, automatic stop order, and emergency drug list preparation.

b) Drug information services

Drug and Poison information centre, Sources of drug information, Computerised services, and storage and retrieval of information.

c) **Patient counseling**

Definition of patient counseling; steps involved in patient counseling, and Special cases that require the pharmacist

d) **Education and training program in the hospital**

Role of pharmacist in the education and training program, Internal and external training program, Services to the nursing homes/clinics, Code of ethics for community pharmacy, and Role of pharmacist in the interdepartmental communication and community health education.

e) **Prescribed medication order and communication skills**

Prescribed medication order- interpretation and legal requirements, and Communication skills- communication with prescribers and patients.

Unit IV **8 Hours**

a) **Budget preparation and implementation**

Budget preparation and implementation

b) **Clinical Pharmacy**

Introduction to Clinical Pharmacy, Concept of clinical pharmacy, functions and responsibilities of clinical pharmacist, Drug therapy monitoring - medication chart review, clinical review, pharmacist intervention, Ward round participation, Medication history and Pharmaceutical care.

c) **Over the counter (OTC) sales**

Introduction and sale of over the counter, and Rational use of common over the counter medications.

Unit V **7 Hours**

a) **Drug store management and inventory control**

Organisation of drug store, types of materials stocked and storage conditions, Purchase and inventory control: principles, purchase procedure, purchase order, procurement and stocking, Economic order quantity, Reorder quantity level, and Methods used for the analysis of the drug expenditure

b) **Investigational use of drugs**

Analog Labs
Analytical Testing Laboratory & Training Centre

Cell : 9618252442

Date: 06-06-2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **B.SUDHEER (Regd No: 193H1R0004)** is a student of B.Pharmacy in **ADITYA COLLEGE OF PHARMACY,** Surampalem, has successfully completed an INDUSTRIAL TRAINING in the field of Formulation Research and Development from 05-05-2023 to 05-06-2023 under our guidance.

During the period of his industrial program with us, he had been exposed to different processes and was found diligent, hardworking and inquisitive.

We wish him every success in his life and career

ANALOG LABS

AUTHORISED SIGNATORY

K. Anupama reddy *M.Sc. Anal.chem., PGDCAQM, MBA*

Director

PRINCIPAL
Aditya College of Pharmacy

3rd floor, plot No. 86, Near Venkateshwara temple, Prashanthi Nagar, Hyderabad-500 072
E-mail:analoglbs@gmail.com, Website : www.analoglabs.co.in

BP 605 T. PHARMACEUTICAL BIOTECHNOLOGY (Theory)

45 Hours

Scope:

- Biotechnology has a long promise to revolutionize the biological sciences and technology.
- Scientific application of biotechnology in the field of genetic engineering, medicine and fermentation technology makes the subject interesting.
- Biotechnology is leading to new biological revolutions in diagnosis, prevention and cure of diseases, new and cheaper pharmaceutical drugs.
- Biotechnology has already produced transgenic crops and animals and the future promises lot more.
- It is basically a research-based subject.

Objectives: Upon completion of the subject student shall be able to;

1. Understanding the importance of Immobilized enzymes in Pharmaceutical Industries
2. Genetic engineering applications in relation to production of pharmaceuticals
3. Importance of Monoclonal antibodies in Industries
4. Appreciate the use of microorganisms in fermentation technology

Unit I **10 Hours**

a) Brief introduction to Biotechnology with reference to Pharmaceutical Sciences.

b) Enzyme Biotechnology- Methods of enzyme immobilization and applications.

c) Biosensors- Working and applications of biosensors in Pharmaceutical Industries.

d) Brief introduction to Protein Engineering.

e) Use of microbes in industry. Production of Enzymes- General consideration - Amylase, Catalase, Peroxidase, Lipase, Protease, Penicillinase.

f) Basic principles of genetic engineering.

Unit II **10 Hours**

a) Study of cloning vectors, restriction endonucleases and DNA ligase.

b) Recombinant DNA technology. Application of genetic engineering in medicine.

c) Application of r DNA technology and genetic engineering in the products:

d) Interferon b) Vaccines- hepatitis- B c) Hormones- Insulin.

e) Brief introduction to PCR

Types of immunity- humoral immunity, cellular immunity

Unit III **10 Hours**

a) Structure of Immunoglobulins

b) Structure and Function of MHC

c) Hypersensitivity reactions, Immune stimulation and Immune suppressions.

d) General method of the preparation of bacterial vaccines, toxoids, viral vaccine, antitoxins, serum-immune blood derivatives and other products relative to immunity.

e) Storage conditions and stability of official vaccines

f) Hybridoma technology- Production, Purification and Applications

Unit IV **08Hours**

a) Immuno blotting techniques- ELISA, Western blotting, Southern blotting.

b) Genetic organization of Eukaryotes and Prokaryotes

c) Microbial genetics including transformation, transduction, conjugation, plasmids and transposons.

d) Introduction to Microbial biotransformation and applications.

e) Mutation.

Unit V **07 Hours**

a. Types of mutation/mutants

b) Fermentation methods and general requirements, study of media, equipments, sterilization methods, aeration process, stirring.

c) Large scale production fermenter design and its various controls.

d) Study of the production of - penicillins, citric acid, Vitamin B12, Glutamic acid, Griseofulvin,

Recommended Books (Latest edition):

1. B.R. Glick and J.J. Pasternak: Molecular Biotechnology: Principles and Applications of RecombinantDNA: ASM Press Washington D.C.
2. RA Goldshy et. al., : Kuby Immunology.
3. J.W. Goding: Monoclonal Antibodies.
4. J.M. Walker and E.B. Gingold: Molecular Biology and Biotechnology by Royal Society of Chemistry.
5. Zaborsky: Immobilized Enzymes, CRC Press, Degraland, Ohio.
6. S.B. Primrose: Molecular Biotechnology (Second Edition) Blackwell Scientific Publication.
7. Stanbury F., P., Whitakar A., and Hall J., S., Principles of fermentation technology, 2nd edition, Aditya books Ltd., New Delhi

ADITYA COLLEGE OF PHARMACY SUBRAMPALEM

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Description, principles involved, classification, control, identification, role of hospital pharmacist, advisory committee.

c) Interpretation of Clinical Laboratory Tests

Blood chemistry, hematology, and urinalysis

Recommended Books (Latest Edition):

1. Merchant S.H. and Dr. J.S.Quadry. *A textbook of hospital pharmacy*, 4th ed. Ahmadabad: B.S. Shah Prakakshan; 2001.
2. Parthasarathi G, Karin Nyfort-Hansen, Milap C Nahata. *A textbook of Clinical Pharmacy Practice- essential concepts and skills*, 1st ed. Chennai: Orient Longman Private Limited; 2004.
3. William E. Hassan. *Hospital pharmacy*, 5th ed. Philadelphia: Lea & Febiger; 1986.
4. Tipnis Bajaj. *Hospital Pharmacy*, 1st ed. Maharashtra: Career Publications; 2008.
5. Scott LT. *Basic skills in interpreting laboratory data*, 4thed. American Society of Health System Pharmacists Inc; 2009.
6. Parmar N.S. *Health Education and Community Pharmacy*, 18th ed. India: CBS Publishers & Distributers; 2008.

Journals:

1. Therapeutic drug monitoring. ISSN: 0163-4356
2. Journal of pharmacy practice. ISSN : 0974-8326
3. American journal of health system pharmacy. ISSN: 1535-2900 (online)
4. Pharmacy times (Monthly magazine)

Chief Superintendent
Aditya College of Pharmacy
SURAMPALEM-533 437

ISO 9001:2008

PHARMA DEEP REMEDIES

Manufactured Of: PHARMACEUTICAL FORMULATIONS

Drug Mfg. Lic.No. 22/RR/AP/2007/F/G TIN No. : 36050818868

Date:_____

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Mr/Miss. **LANKE SOWMYA**, D/o Mr. **LANKE PRASAD** is a bonafide student of ADITYA COLLEGE OF PHARMACY. And he/she has undergone industrial training in our organization from 02-5-2023 to 02-6-2023, as part of partial fulfillment of his/her B. Pharmacy course bearing Hall Ticket No- **193H1R0029.**

During the training period he/she had interacted with Quality control, Quality Assurance & production departments and acquired basic knowledge in these areas.

During this aforesaid period, we found him/her hardworking, sincere and learning attitude.

FOR PHARMA DEEP REMEDIES

Manager operations

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM-533 437

BP107P. HUMAN ANATOMY AND PHYSIOLOGY (Practical)

4 Hours/week

Practical physiology is complimentary to the theoretical discussions in physiology. Practicals allow the verification of physiological processes discussed in theory classes through experiments on living tissue, intact animals or normal human beings. This is helpful for developing an insight on the subject.

1. Study of compound microscope.
2. Microscopic study of epithelial and connective tissue
3. Microscopic study of muscular and nervous tissue
4. Identification of axial bones
5. Identification of appendicular bones

6. Introduction to hemocytometry.
7. Enumeration of white blood cell (WBC) count
8. Enumeration of total red blood corpuscles (RBC) count
9. Determination of bleeding time
10. Determination of clotting time
11. Estimation of hemoglobin content
12. Determination of blood group.
13. Determination of erythrocyte sedimentation rate (ESR).
14. Determination of heart rate and pulse rate.
15. Recording of blood pressure.

Recommended Books (Latest Editions)

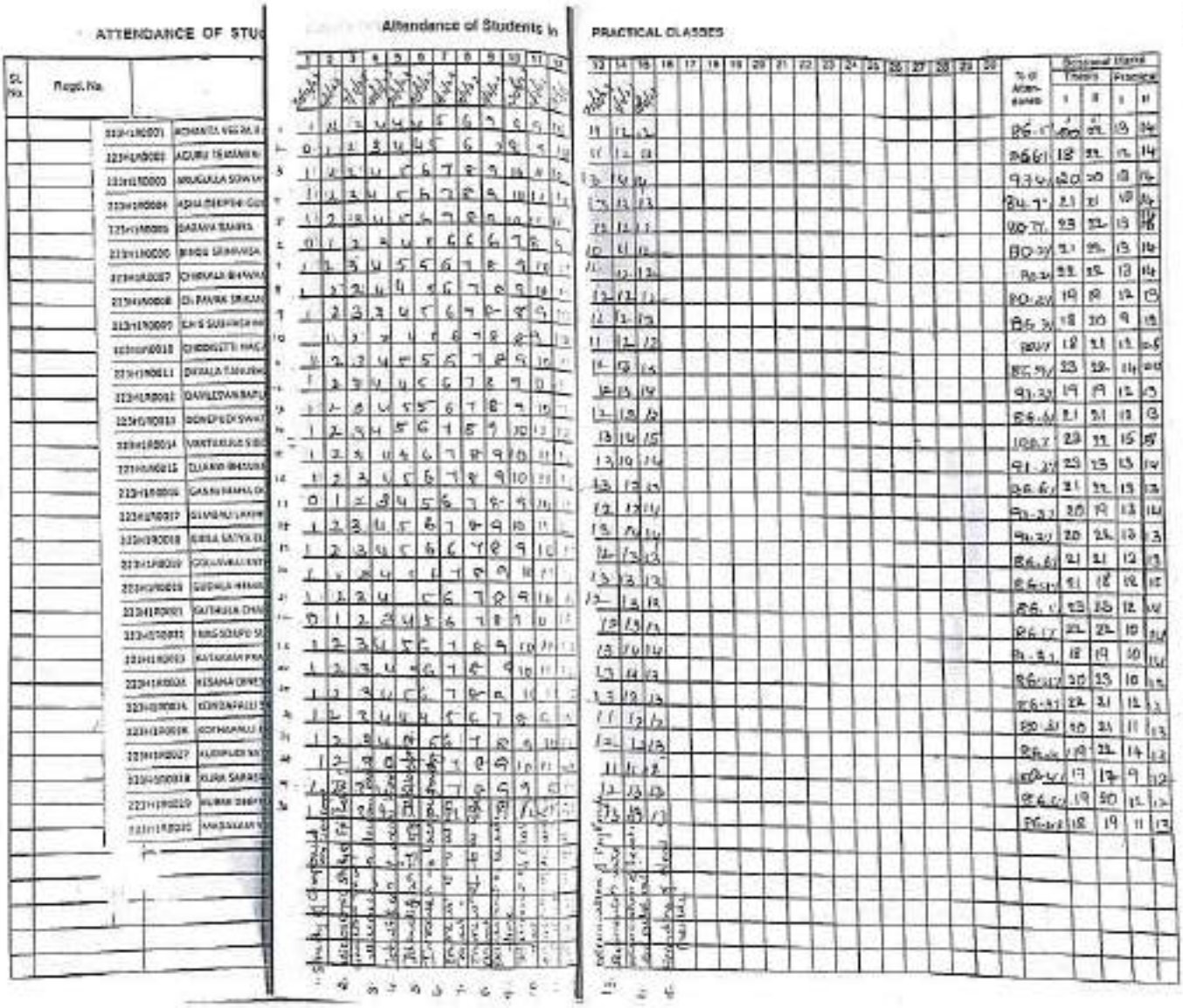
1. Essentials of Medical Physiology by K. Sembulingam and P. Sembulingam. Jaypee brothers medical publishers, New Delhi.
2. Anatomy and Physiology in Health and Illness by Kathleen J.W. Wilson, Churchill Livingstone, New York
3. Physiological basis of Medical Practice-Best and Tailor. Williams & Wilkins Co,Riverview,MI USA
4. Text book of Medical Physiology- Arthur C,Guyton andJohn.E. Hall. Miamisburg, OH, U.S.A.
5. Principles of Anatomy and Physiology by Tortora Grabowski. Palmetto, GA, U.S.A.

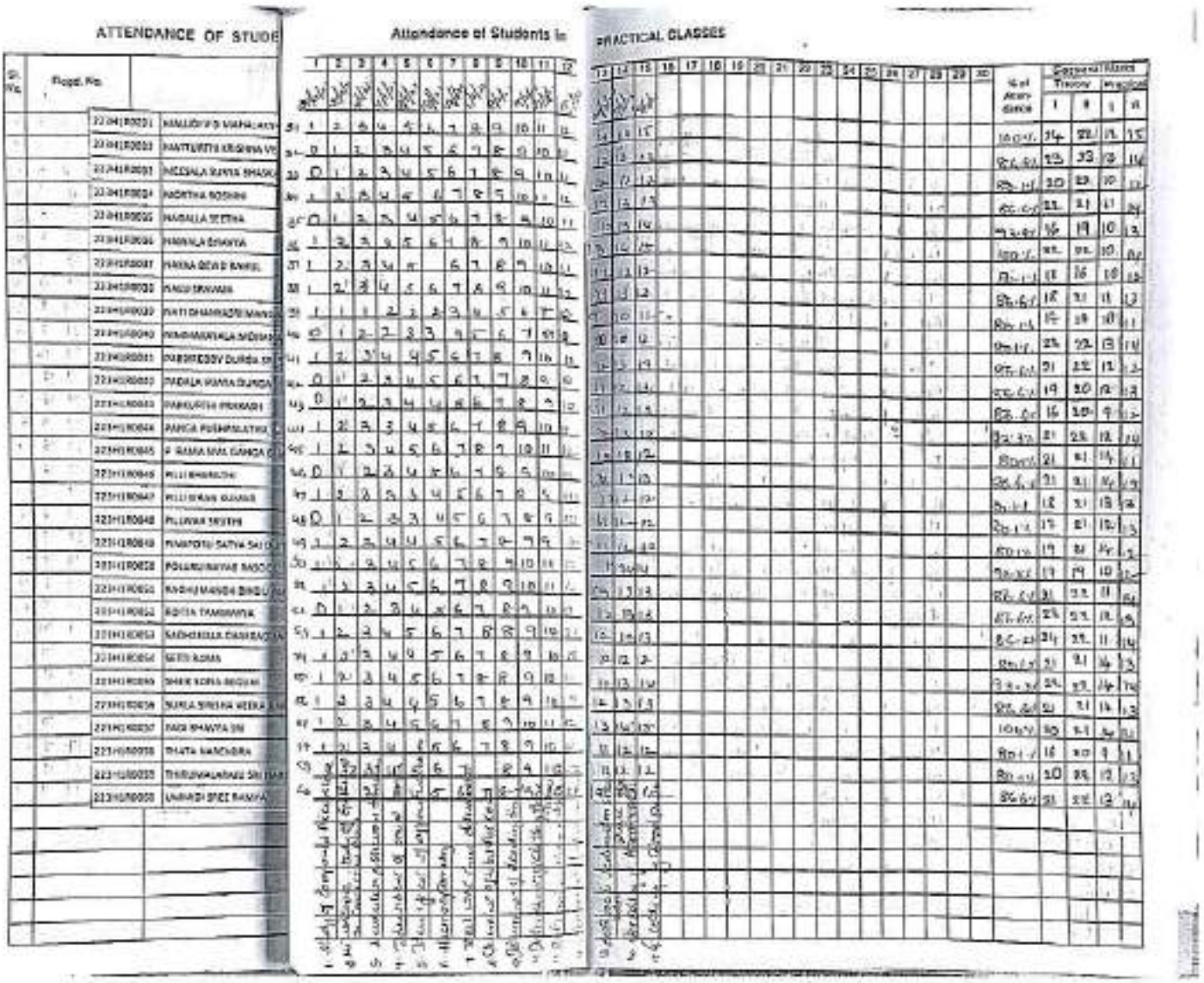
6. Textbook of Human Histology by Inderbir Singh, Jaypee brother's medical publishers, New Delhi.
7. Textbook of Practical Physiology by C.L. Ghai, Jaypee brother's medical publishers, New Delhi.
8. Practical workbook of Human Physiology by K. Srinageswari and Rajeev Sharma, Jaypee brother's medical publishers, New Delhi.

Reference Books (Latest Editions)

1. Physiological basis of Medical Practice-Best and Tailor. Williams & Wilkins Co, Riverview, MI USA
2. Text book of Medical Physiology- Arthur C, Guyton and John. E. Hall. Miamisburg, OH, U.S.A.
3. Human Physiology (vol 1 and 2) by Dr. C.C. Chatterrje ,Academic Publishers Kolkata

BP107P III B.PHARM HUMAN ANATOMY AND PHYSIOLOGY - I PRACTICAL

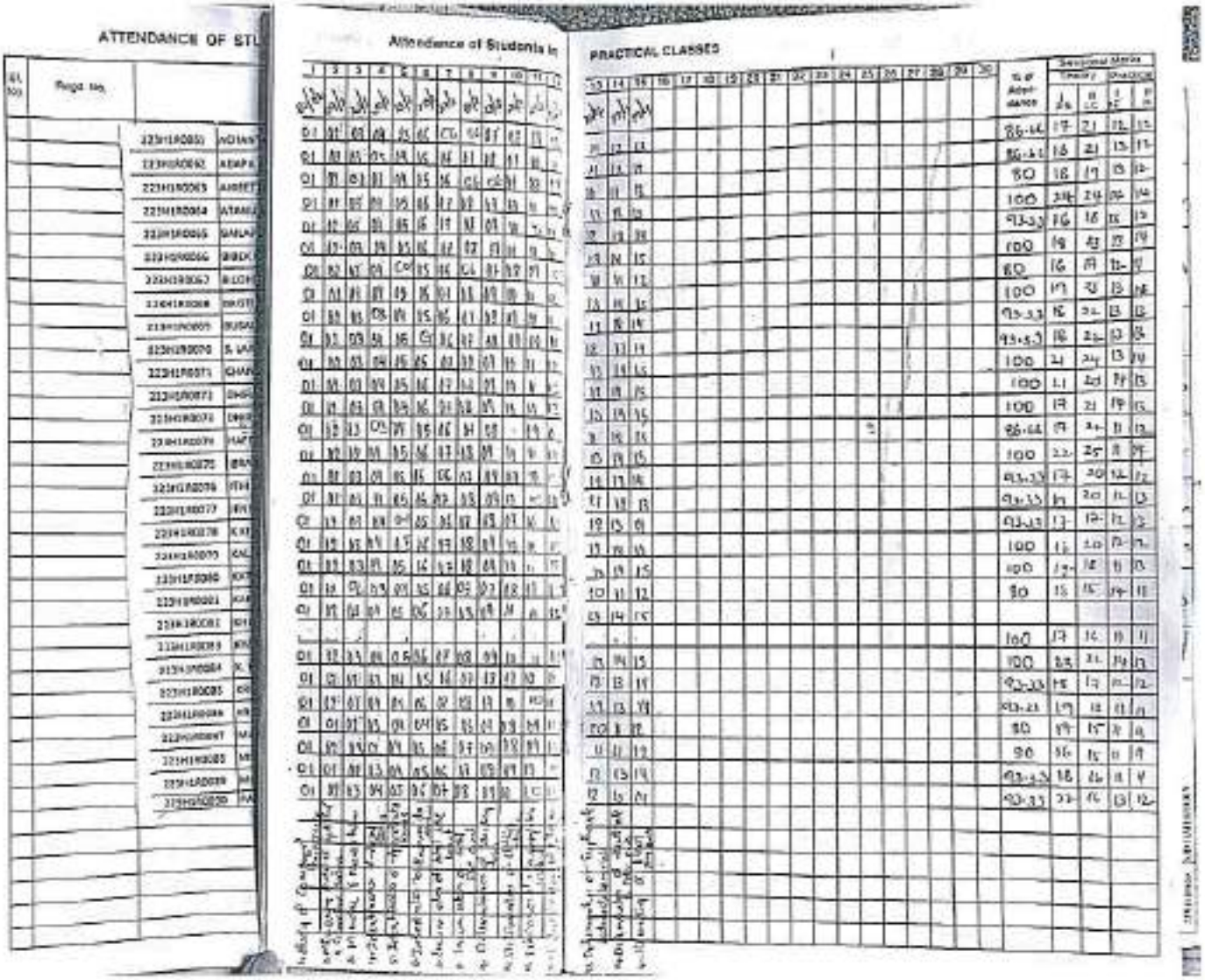


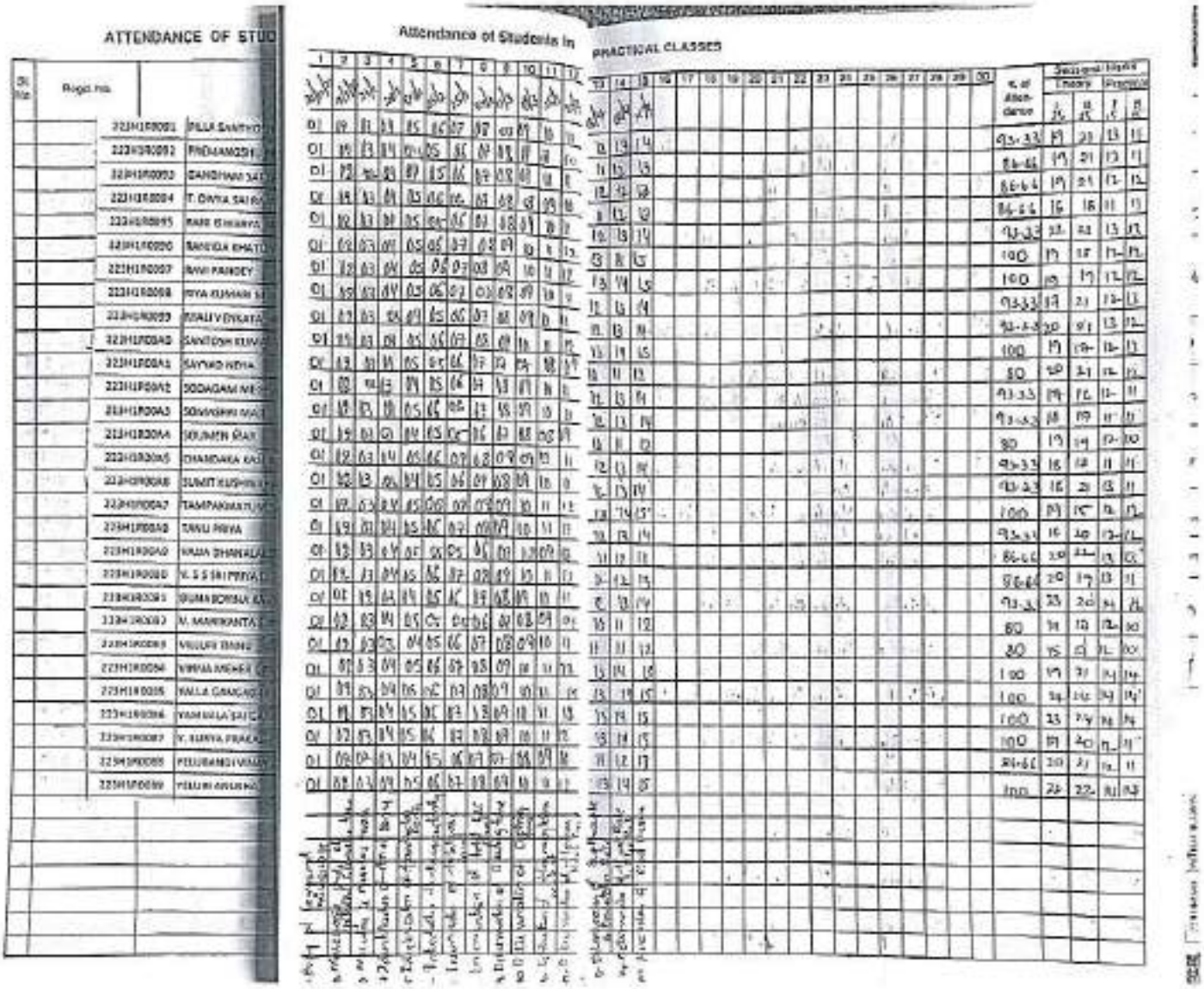


ATTENDANCE OF STUDE

Attendance of Students in

PRACTICAL CLASSES





ATTENDANCE OF STUD

Attendance of Students in PRACTICAL CLASSES

BP108P. PHARMACEUTICAL ANALYSIS (Practical)

4 Hours / Week

I **Limit Test of the following**
- (1) Chloride
- (2) Sulphate
- (3) Iron
- (4) Arsenic

II **Preparation and standardization of**
- (1) Sodium hydroxide
- (2) Sulphuric acid
- (3) Sodium thiosulfate
- (4) Potassium permanganate
- (5) Ceric ammonium sulphate

III **Assay of the following compounds along with Standardization of Titrant**
- (1) Ammonium chloride by acid base titration
- (2) Ferrous sulphate by Cerimetry
- (3) Copper sulphate by Iodometry
- (4) Calcium gluconate by complexometry
- (5) Hydrogen peroxide by Permanganometry
- (6) Sodium benzoate by non-aqueous titration
- (7) Sodium Chloride by precipitation titration

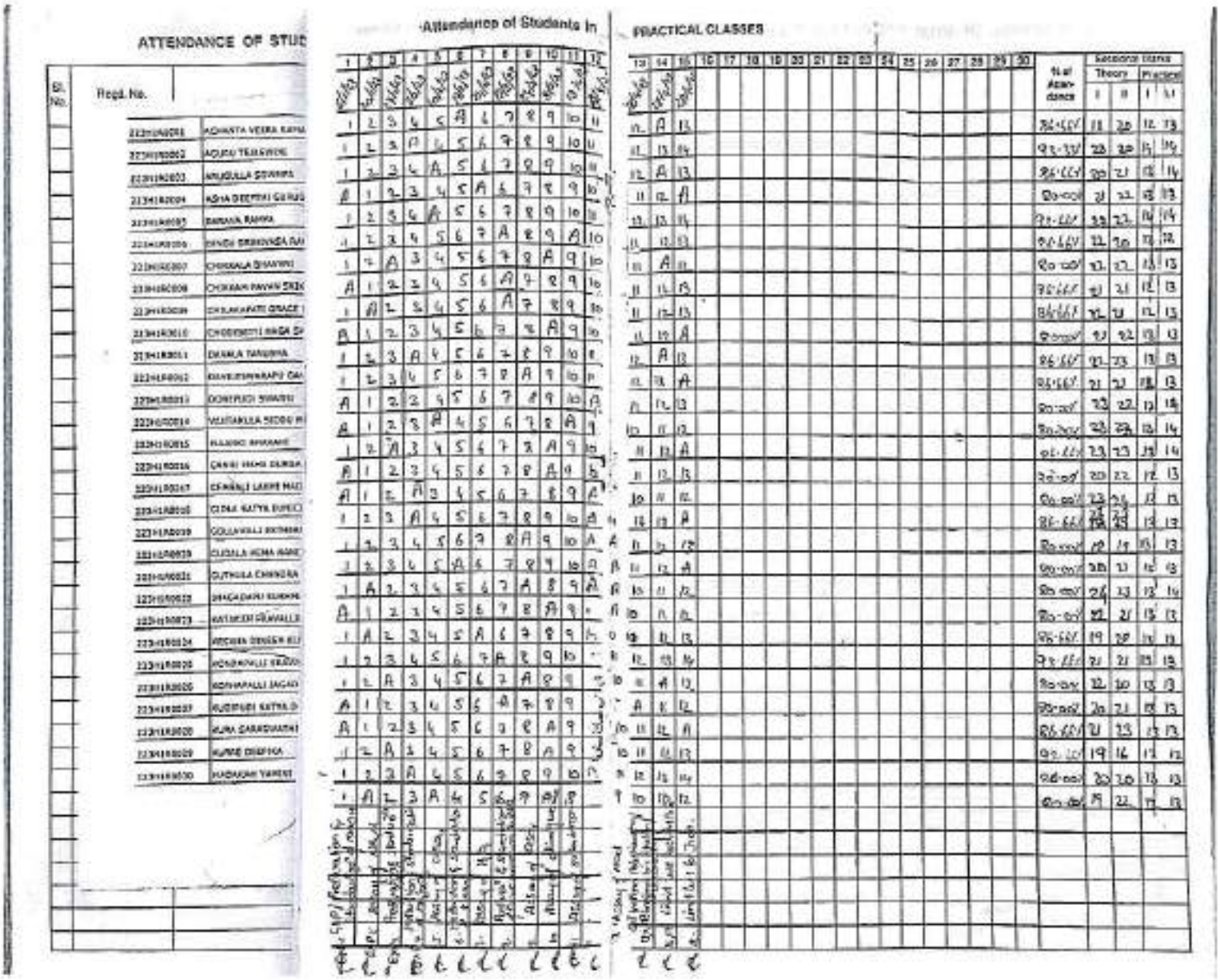
IV **Determination of Normality by electro-analytical methods**
- (1) Conductometric titration of strong acid against strong base
- (2) Conductometric titration of strong acid and weak acid against strong base
- (3) Potentiometric titration of strong acid against strong base

Recommended Books: (Latest Editions)

1. A.H. Beckett & J.B. Stenlake's, Practical Pharmaceutical Chemistry Vol I & II, Stahlone Press of University of London
2. A.I. Vogel, Text Book of Quantitative Inorganic analysis
3. P. Gundu Rao, Inorganic Pharmaceutical Chemistry
4. Bentley and Driver's Textbook of Pharmaceutical Chemistry
5. John H. Kennedy, Analytical chemistry principles
6. Indian Pharmacopoeia.

BP109- I/I PHARMACEUTICAL ANALYSIS - I

PRACTICAL



ATTENDANCE OF STL

Attendance of Students in PRACTICAL CLASSES

Sl. No.	Regd. No.	
	223H1R0061	ACHANTA PF
	223H1R0062	ADAPA ASW
	223H1R0063	AMISETTI VA
	223H1R0064	ATANU KUM
	223H1R0065	BALAPUGU N
	223H1R0066	BEEK KUVA
	223H1R0067	B.LOHITHA S
	223H1R0068	BRSTI DEV
	223H1R0069	BUSALA GOV
	223H1R0070	S. LAKSHMI C
	223H1R0071	CHANDAN KI
	223H1R0072	DHIRAJ SAH
	223H1R0073	DHIRENDRA
	223H1R0074	HAFEEZ ULL/
	223H1R0075	IRFAN MUSA
	223H1R0076	ITHI SUVARN
	223H1R0077	JENNA KIRUS
	223H1R0078	K KISHAN KU
	223H1R0079	KALLA JYOTI
	223H1R0080	KATAKAM KR
	223H1R0081	KARRI MANI
	223H1R0082	KHIRUD HAS
	223H1R0083	KHULAKPAM
	223H1R0084	K. S LAKSHM
	223H1R0085	KRISHNA DU
	223H1R0086	KRISHNA KU
	223H1R0087	MARCEDDU V
	223H1R0088	MD HAFIUC
	223H1R0089	MOHARANA
	223H1R0090	PALLA RANI

Sessional Marks		
Theory		Practical
I	II	
20	20	11 10
21	21	13 11
20	21	13 13
20	22	15 13
20	22	13 12
22	22	14 13
20	20	14 10
24	23	13 14
21	23	14 14
23	22	14 14
24	22	13 14
22	22	14 13
20	25	14 13
21	21	13 11
24	23	14 14
20	20	14 12
22	22	14 13
20	21	13 12
20	19	11 11
20	20	13 9
21	21	11 12
25	24	14 14
20	22	16 12
20	19	14 12
21	18	14 13
20	16	14 9
21	22	14 12

COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy
Surampalem-533 437

ATTENDANCE OF STUDI

Attendance of Students in PRACTICAL CLASSES

Sl No	Regd No	
	223H01[illegible]091	PILLA SANTHOSHI
	223H1R0002	PREMANGSHU PA
	223H1R00[illegible]	GANDHAM SATYA
	223H1R0054	T. DIVYA SAI RANJ
	223H1R0095	RANI ISWARYA HE
	223H1R0096	RANIDA KHATUN
	223H1R0097	RAVI PANDEY
	223H1R0098	RIYA KUMARI MISH
	223H1R0099	RIYALI VENKATA LA
	223H1R0040	SANTOSH KUMAR
	223H1R00A1	SAYYAD NEHA
	223H1R0042	SODAGAM MRSH
	223H1R00A3	SOMASHRI MAJI
	223H1R00A4	SOUMEN MAJI
	223H1R0045	CHANDAKA KASI A
	223H1R00A6	SUMIT KUSHWAH
	223H1R0047	TANUPAKMAYUM
	223H1R00A8	TANU PRIYA
	223H1R00A9	VAJJA DHANALAK
	223H1R0080	V. S S SRI PRIYA D
	223H1R0081	DUNABOYINA KA
	223H1R0082	K. MANIKANTA R
	223H1R0083	VILLURI TINNU
	223H1R0084	VINNA MEHER GA
	223H1R0085	YALLA GANGARH
	223H1R0086	YANDALA SAI GA
	223H1R0087	Y. SURYA PRAKA
	223H1R0088	YELUGANDI VINA
	223H1R0089	YELURI ANUSHA

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BP109P. PHARMACEUTICSI (Practical)

3 Hours / week

1 . Syrups

a) Syrup IP'66

b) Compound syrup of Ferrous Phosphate BPC'68

2. Elixirs a) Piperazine citrate elixir

b) Paracetamol pediatric elixir

3.Linctus a) Terpin Hydrate Linctus IP'66

b) Iodine Throat Paint (Mandles Paint)

4. Solutions

a) Strong solution of ammonium acetate

b) Cresol with soap solution

c) Lugol's solution

5. Suspensions

a) Calamine lotion

b) Magnesium Hydroxide mixture

c) Aluminimum Hydroxide gel

6. Emulsions a) Turpentine Liniment

b) Liquid paraffin emulsion

7. Powders and Granules

a) ORS powder (WHO)

b) Effervescent granules

c)Dusting powder

d)Divded powders

8. Suppositories

a) Glycero gelatin suppository

b) Coca butter suppository

c) Zinc Oxide suppository

8. Semisolids

a) Sulphur ointment

b) Non staining-iodine ointment with methyl salicylate

c) Carbopal gel

9. Gargles and Mouthwashes

a) Iodine gargle

b) Chlorhexidine mouthwash

Recommended Books: (Latest Editions)

1. H.C. Ansel et al., Pharmaceutical Dosage Form and Drug Delivery System, Lippincott Williams and Walkins, New Delhi.
2. Carter S.J., Cooper and Gunn's-Dispensing for Pharmaceutical Students, CBS publishers, New Delhi.
3. M.E. Aulton, Pharmaceutics, The Science& Dosage Form Design, Churchill Livingstone, Edinburgh.
4. Indian pharmacopoeia.
5. British pharmacopoeia.
6. Lachmann. Theory and Practice of Industrial Pharmacy,Lea& Febiger Publisher, The University of Michigan.
7. Alfonso R. Gennaro Remington. The Science and Practice of Pharmacy, Lippincott Williams, New Delhi.
8. Carter S.J., Cooper and Gunn's. Tutorial Pharmacy, CBS Publications, New Delhi.
9. E.A. Rawlins, Bentley's Text Book of Pharmaceutics, English Language Book Society, Elsevier Health Sciences, USA.
10. Isaac Ghebre Sellassie: Pharmaceutical Pelletization Technology, Marcel Dekker, INC, New York.
11. Dilip M. Parikh: Handbook of Pharmaceutical Granulation Technology, Marcel Dekker, INC, New York.
12. Francoise Nieloud and Gilberte Marti-Mestres: Pharmaceutical Emulsions and Suspensions, Marcel Dekker, INC, New York.

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Aditya College of Pharmacy
SURAMPALEM-533 437

BP109P III B PHARM PHARMACEUTICS -I

PRACTICAL

ATTENDANCE OF STU

Sl. No.	Regd. No.	
	[redacted]	ADVANTA VEERA RAI
	[redacted]	AKKIRU TEJASWINI
	[redacted]	ARUGULLA SOWMYA
	[redacted]	ASHA DEEPTHI GUNDU
	[redacted]	BARAVA RAMYA
	[redacted]	BINGI SRINIVASA RA
	[redacted]	CHIGULLA BHAVANI
	[redacted]	CH. PURNACHANDRAM
	[redacted]	CH. GRACE SUSHANTH
	[redacted]	CHODISETTI HAVA SA
	[redacted]	DAVALA TARUNA
	[redacted]	D. DAYATEJESWARI
	[redacted]	DOKIPILLI SWATHI
	[redacted]	V. SIDDU MANIKANTA
	[redacted]	ELLADKI BHAVANI
	[redacted]	GANDI MAHA DURGA
	[redacted]	GOMBALE LAKSHMI PRA
	[redacted]	GOLLA SATYA RENUKA
	[redacted]	GOLLAVELLI MITHUN
	[redacted]	GUDALA REMA RANI
	[redacted]	GUTHULA CHANDRA
	[redacted]	JAGADAPU SUSHMA
	[redacted]	KATAKAM PRAVALLI
	[redacted]	KIRANA DURGA PRASA
	[redacted]	KOTAPALLI BHAVANI
	[redacted]	KOTTAPALLI JAGADE
	[redacted]	KURUKURI SATYA DE
	[redacted]	KURA SARASWATHI
	[redacted]	KURRE DEEPIKA
	[redacted]	MADHIRAM YAMINI

Attendance of Students in Theory Classes — Lab

111	112	115	114	115	116	117	118	119	120	Percentage of Attendance
21/1/23	6/1	23/1	30/1	6/2	13/2	20/2	27/2	20/3	27/3	
1	2	3	4	5	6	7	A	8	9	
1	A	2	3	4	5	6	7	8	9	
1	2	3	4	5	6	7	8	9	10	
1	2	3	4	A	5	6	7	8	9	
1	2	3	4	5	6	7	8	9	10	
1	2	3	4	5	6	7	8	9	10	
1	2	3	4	5	6	7	8	9	10	
1	A	2	3	4	5	A	6	7	8	
1	2	3	4	5	6	7	8	9	10	
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1	2	3	4	5	6	7	8	9	10	
1	2	3	A	4	5	6	7	8	9	
1	2	3	4	5	6	7	8	9	10	
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1	2	3	4	5	6	7	A	8	9	
1	2	3	4	5	6	7	8	9	10	
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1	A	2	3	4	5	6	7	8	9	
1	2	3	4	5	6	7	8	9	10	
1	2	3	4	5	6	7	8	9	10	
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A	1	2	3	4	5	6	A	7	8	
1	2	3	4	5	6	7	8	9	10	
1	2	A	3	4	5	A	6	7	8	
1	2	3	4	5	6	7	8	9	10	
1	2	3	4	5	6	7	8	9	10	
1	2	3	A	4	5	6	7	8	9	

Attendance of Students in Theory Classes — Lab — Tutorial

121	122	123	124	125	Percentage of Attendance
3/4	10/4	17/4	24/4		
10	11	12	13		93.3
10	11	12	13		93.3
11	12	13	14		91.1
A	10	11	A		93.3
11	12	13	14		95.5
11	12	13	14		97.7
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11	A	12	13		95.5
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11	12	13	14		91.1
11	12	13	14		93.3
9	10	A	11		95.5
11	12	13	14		97.7
9	10	A	11		95.5
A	11	12	13		95.5
11	12	13	14		93.3
A	9	A	10		95.5

26	27	28	29	30	% of Attendance	Sessional Marks	
						Theory	Practical
						I II	I II
						19 20	14 14
						16 20	13 14
						19 19	14 14
						21 19	13 14
						20 20	14 13
						17 20	14 14
						20 20	14 14
						19 19	14 14
						21 19	13 14
						20 19	14 14
						23 21	14 14
						17 21	13 14
						21 21	13 13
						21 21	13 14
						22 21	13 14
						17 19	14 14
						21 19	13 14
						23 19	14 14
						20 18	13 14
						19 20	13 13
						21 21	14 14
						23 20	13 14
						16 18	13 14
						20 19	13 14
						20 19	14 14
						18 19	13 13
						22 21	14 14
						12 18	14 13
						16 19	14 13
						20 19	13 13

ADITYA COLLEGE OF PHARMACY SURAMPALEM

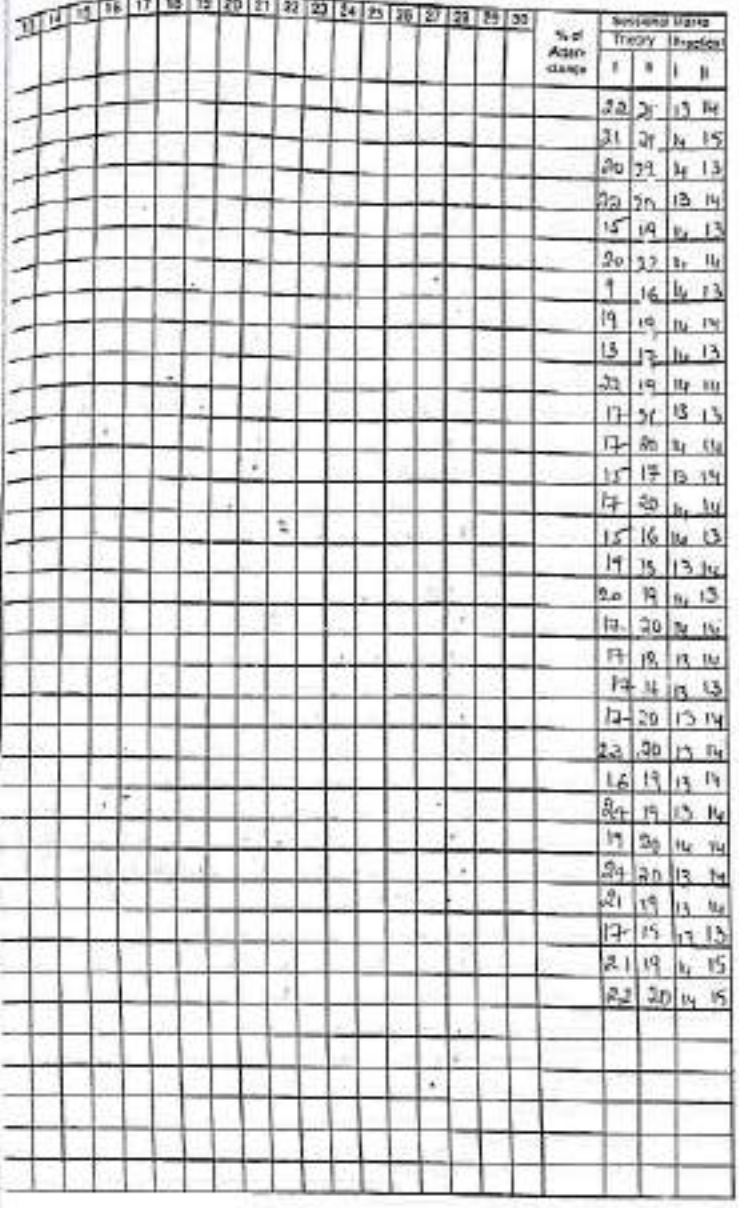
PRINCIPAL
Aditya College of Pharmacy

ATTENDANCE OF STUDE

Attendance of Students in

PRACTICAL CLASSES

Sl No	Regd. No.	



% of Attendance	Sessional Marks			
	Theory		Practical	
	I	II	I	II
22	21	13	14	
31	21	14	15	
20	19	14	13	
22	20	13	14	
15	19	14	13	
20	22	11	14	
9	16	14	13	
19	19	14	14	
13	17	14	13	
23	19	11	11	
17	21	13	13	
12	20	14	14	
15	17	13	14	
17	20	14	14	
15	16	14	13	
19	15	13	14	
20	19	14	13	
12	20	14	14	
17	19	13	14	
17	14	13	13	
12	20	13	14	
22	20	13	14	
16	19	13	14	
24	19	13	14	
19	20	14	14	
24	20	13	14	
21	19	13	14	
12	15	12	13	
21	19	14	15	
22	20	14	15	

ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL

ATTENDANCE OF STUDENTS

Sl. No.	Regd. No.	
	223H1R0051	SOMANTA PREM
	223H1R0062	ADAPA ASWITH
	223H1R0063	ANISETTI VATSA
	223H1R0064	ATAVU KUMAR
	223H1R0065	BAILAPUDI NIHA
	223H1R0066	BIBEK KUMAR SI
	223H1R0067	D LOHITHA SAI V
	223H1R0068	BHATI DEY
	223H1R0069	GUSALA GOWTH
	223H1R0070	S. LAKSHMI GOW
	223H1R0071	CHANDAN KUM
	223-1R0072	DHIRU SAH
	223-1R0073	DHIRENDRA KAP
	223-1R0074	HAFEEZ UELAH
	223H1R0075	IBRAR MUSALM
	223H1R0076	ITHI SUVARNA K
	223H1R0077	JENNA KRUSHNI
	223H1R0078	K KISHAN KUMA
	223H1R0079	KALLA JYOTHI
	223H1R0080	KATHAM KRISHN
	223H1R0081	KAVVI NAVITHA
	223H1R0082	KHFUD MORAY
	223H1R0083	KHULABPAM SHA
	223H1R0084	K. C LAKSHMI SA
	223H1R0085	KRISHNA GUBBA
	223H1R0086	KRISHNA KUMAR
	223H1R0087	MAREDU VYSHN
	223H1R0088	MD HAFIUDDIN
	223H1R0089	MOHAMMAD AN
	223H1R0090	PALLA RAM

Attendance of Students in

PRACTICAL CLASSES

% of Attendance	Sessional Marks Theory I	Theory II	Practical
89.77	18	19	10
91.67	18	20	12
94.87	16	19	12
91.6	19	21	13
91.67	18	17	12
91.47	20	19	14
91.67	15	11	11
89.74	20	14	13
91.87	21	13	11
93.67	22	21	13
85.79	27	17	14
91.67	21	16	12
87.71	16	16	11
95.91	16	20	10
89.71	28	20	14
91.87	21	16	10
89.74	23	18	10
93.81	21	12	12
85.91	15	19	13
71.81	15	15	11
91.87	14	13	10
89.71	17	10	12
91.67	25	22	14
89.71	16	16	10
91.87	21	14	10
91.87	15	18	13
93.81	10	13	10
91.87	14	18	11
93.87	19	17	11
89.74	13	21	12

ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy

ATTENDANCE OF STUDE

Attendance of Students in

PRACTICAL CLASSES

Sl. No.	Regd. No.	
	223H1R0091	PILLA SIVATHOSH
	223H1R0092	PREMANDSHU P
	223H1R0093	GANDHAM SATY
	223H1R0094	T. DIVYA SAI RAN
	223H1R0095	RANI BWARYA R
	223H1R0096	RANJIDA KHATUJ
	223H1R0097	RAVI PANDEY
	223H1R0098	RIYA KUMARI MI
	223H1R0099	RYALI VENKATA I
	223H1R00A0	SANTOSH KUMA
	223H1R00A1	SAYYAD RIDHA
	223H1R00A2	SODAGAM MEDI
	223H1R00A3	SOMASHRI MAJI
	223H1R00A4	SOUMEN MAJI
	223H1R00A5	CHANDAKA KAS
	223H1R00A6	SUMIT KUSHWA
	223H1R00A7	TAMPAKOMAYUN
	223H1R00A8	TANU PRIYA
	223H1R00A9	VAJJA DHANALA
	223H1R00B0	V. S S SRI PRIYA
	223H1R00B1	DUWADIVVA KA
	223H1R00B2	V. MANIKANTA S
	223H1R00B3	VELLURI TIMMJ
	223H1R00B4	VINNA MOHER G
	223H1R00B5	YALLA GANGABH
	223H1R00B6	YAMUALA SAI GA
	223H1R00B7	Y. SURYA PRASA
	223H1R00B8	VELUBANDI VINA
	223H1R00B9	PELURI ANUSHA

% of Attendance	Sessional Marks Theory I	Theory II	Practical
89.81	18	21	12
91.81	21	23	13
81.71	19	18	14
91.87	13	21	10
89.71	21	16	10
91.87	23	19	12
89.71	19	20	12
85.71	19	18	12
89.77	20	17	12
87.71	19	19	13
87.71	23	15	13
91.81	21	15	14
87.71	14	17	13
85.71	17	21	12
91.81	20	17	11
85.71	14	19	12
87.71	17	15	14
91.81	18	21	11
87.71	20	21	13
89.71	20	19	12
87.71	22	13	11
85.71	17	13	12
71.87	20	18	15
93.81	25	19	12
89.77	25	21	13
85.71	25	19	12
87.71	20	19	13
89.77	14	23	12
89.77	22	22	14

ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy

BP110P. PHARMACEUTICAL INORGANIC CHEMISTRY (Practical)

4 Hours / Week

I **Limit tests for following ions**
- Limit test for Chlorides and Sulphates
- Modified limit test for Chlorides and Sulphates
- Limit test for Iron
- Limit test for Heavy metals
- Limit test for Lead
- Limit test for Arsenic

II **Identification test**
- Magnesium hydroxide
- Ferrous sulphate
- Sodium bicarbonate
- Calcium gluconate
- Copper sulphate

III **Test for purity**
- Swelling power of Bentonite
- Neutralizing capacity of aluminum hydroxide gel
- Determination of potassium iodate and iodine in potassium Iodide

IV **Preparation of inorganic pharmaceuticals**
- Boric acid
- Potash alum
- Ferrous sulphate

Recommended Books (Latest Editions)

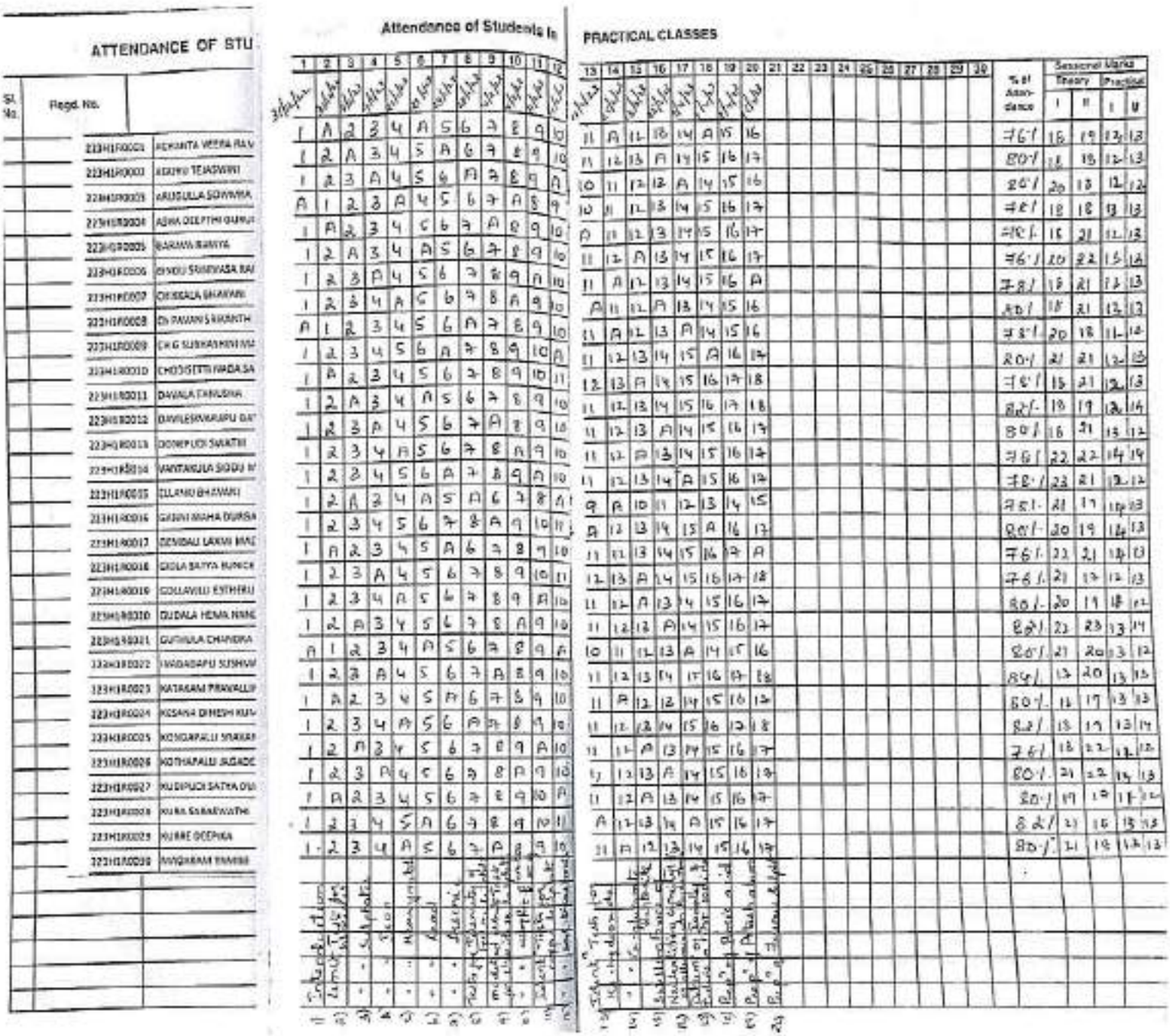
1. A.H. Beckett & J.B. Stenlake's, Practical Pharmaceutical Chemistry Vol I & II, Stahlone Press of University of London, 4th edition.
2. A.I. Vogel, Text Book of Quantitative Inorganic analysis
3. P. Gundu Rao, Inorganic Pharmaceutical Chemistry, 3rd Edition
4. M.L.Schroff, Inorganic Pharmaceutical Chemistry
5. Bentley and Driver's Textbook of Pharmaceutical Chemistry
6. Anand & Chatwal, Inorganic Pharmaceutical Chemistry
7. Indian Pharmacopoeia

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM-533 437

BP110P I II B PHARM PHARMACEUTICAL INORGANIC CHEMISTRY PRACTICAL

ATTENDANCE OF STU

Attendance of Students in PRACTICAL CLASSES



ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy
Surampalem-533 437

ATTENDANCE OF STUD

Attendance of Students in PRACTICAL CLASSES

Sl No	Regd. No.	
	223H1R0091	MALLIDI V D MANIKANT
	223H1R0092	MATTUPATHI KRISHNA V
	223H1R0093	MEESALA SURYA BHASK
	223H1R0094	MOBINA NOSHIN
	223H1R0095	NADELLA SEETHA
	223H1R0096	NAINALA DIVYA
	223H1R0097	NAKKA DEVID RAHUL
	223H1R0098	NALLI SRAVANI
	223H1R0099	NATI DHANYASRI MANI
	223H1R00100	N RAMAKAYMA MOHA
	223H1R00101	PARVATREDDY DURGA SI
	223H1R00102	PASALA VIJAYA DURGA
	223H1R00103	PONNURTHI PRAKASH
	223H1R00104	PONSA PUSHPALATHA
	223H1R00105	P RAMA SIVA GANGA D
	223H1R00106	PILLI BHARATHI
	223H1R00107	PILLI KIRAN KUMAR
	223H1R00108	PILLIWAR SRUTHI
	223H1R00109	PINAPOTU SATYA SAI D
	223H1R00110	POLURU NAYAB RASOO
	223H1R00111	RADHUVANSHA BINDU
	223H1R00112	ROTTA TAMMAYYA
	223H1R00113	SADHANALA CHANDAN
	223H1R00114	SETTI ANNA
	223H1R00115	SHAIK SOFIA BEGUM
	223H1R00116	SURLA SIRISHA VERMA R
	223H1R00117	TADI BHAVYA SRI
	223H1R00118	THATA NARENDRA
	223H1R00119	THIRUMALARAJU SRI H
	223H1R00120	UMAMADI SREE RAMYA

% of Attendance	Sessional Marks Theory		Practical	
	I	II	I	II
78%	21	22	13	12
80%	21	21	14	14
73%	19	21	13	13
90%	22	22	13	13
73%	21	19	11	12
76%	21	22	13	13
73%	17	19	11	11
78%	21	18	13	12
80%	16	19	13	13
90%	22	21	13	12
80%	20	21	13	13
76%	20	21	11	11
86%	19	19	11	12
73%	20	21	11	12
90%	19	20	11	14
80%	20	22	14	14
73%	16	16	14	13
80%	24	21	13	12
80%	20	18	13	13
71%	15	17	11	11
90%	20	21	13	13
80%	20	21	13	13
95%	19	20	10	11
82%	21	20	13	13
80%	24	23	14	13
88%	20	20	12	13
96%	20	16	13	14
80%	19	22	11	10
82%	19	24	13	13
88%	20	16	12	12

ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy

ATTENDANCE OF STU

Sl. No.	Regd. No.	
		ACHANTA PREM CHAND
		ADAPA ABHITHA
		ANISETTI VAITREYA
		ATARU KUMAR DE
		BATLAPUDI KEHARIKA
		BISEK KUMAR SAH
		LONETHA SAI VARSHITH BOHRA
		MUDYI DEE
		BUSALA GOWTHAMI
		SIDDA LAKSHMI GOWRI JAHNAVI
		CHANDAN KUMAR SHAH
		DHIRAJ SAH
		DHINDIGIRA KAVYA
		HAFEEZ ULLAH
		ISRAIL MUBASHIR
		CHE DURGESH KEERTHI
		JENNA KHUSHBUNIA
		K KISHAN KUMAR
		KALLA JYOTHI
		KATHAM KRISHNA PRAVEEN
		KAKKI HAMITHA REDDY
		KHULAKPEM SMILEEA
		KOHANDURI S LAKSHMI SAHYUKTI
		KRISHNA GUDIALA
		KRISHNA KUMAR MEHTA
		PRAVEEN VISHNOI
		MD HAFIZUDDIN
		MOHAMMAD ANAS

Attendance of Students in PRACTICAL CLASSES

% of Attendance	Sessional Marks Theory I	Theory II	Practical I	Practical II
89.4	18		12	12
89.4	20		12	12
94.7	19		11	12
100	21		12	12
100	21		12	12
89.4	21		13	14
94.7	14		12	13
94.7	21		13	13
89.4	19		13	13
94.7	20		13	13
89.4	23		13	14
84.2	21		12	13
94.7	19		12	12
89.4	14		11	12
89.4	23		14	14
100	17		13	13
100	16		12	13
94.7	20		13	13
94.7	18		11	13
94.7	16		12	12
100	19		12	11
94.7	20		12	13
94.7	20		14	14
94.7	19		12	12
94.7	20		12	13
94.7	17		13	13
100	15		12	12
94.7	21		12	12
	19		13	13

ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy

ATTENDANCE OF STUD

Attendance of Students in PRACTICAL CLASSES

Sl. No.	Regd. No.	Name
	223H1A0091	PILLA MANIKANTA
	223H1A0092	PERNAMSETTI PRAKASH
	223H1A0093	GADIRAJU SATYA DEVI
	223H1A0094	TUPATI DIVYA SAI RAMA LAKSHMI
	223H1A0095	MANI SRIMANYA INDUKURI
	223H1A0096	RAHEEDA KHATUN
	223H1A0097	RAVI PANDEY
	223H1A0098	RIYA KUMARI MISHRA
	223H1A0099	RIYALI VENKATA LAKSHMI KALLA
	223H1A00A0	SANTOSH KUMAR SHAH
	223H1A00A1	SATYAM RANA
	223H1A00A2	SOORAJAM MEGHANA
	223H1A00A3	SOMASHRAJ HAJI
	223H1A00A4	SOUMITH HAJI
	223H1A00A5	SWARDAKA KASILAKSHAPURNA
	223H1A00A6	SUMIT KUSHWAHA
	223H1A00A7	TAKPAKPATUM SAMANTA
	223H1A00A8	TANU PRIYA
	223H1A00A9	VALLA DHANALAKSHMI
	223H1A00B0	VALLABHANE SRINIDHI SATYA SRI PRIYA
	223H1A00B1	VUPPADDENE KAVYANJALI
	223H1A00B2	VUDAMSETTI MANIKANTA SWAMY
	223H1A00B3	VELLURI TINNU
	223H1A00B4	VENNA PREMER GAYATRI DEVI
	223H1A00B5	YALLA GANGADHARAMU
	223H1A00B6	YARLAGILA SAI DAYADHAR
	223H1A00B7	YARRAM SURYA PRAKASH REDDY
	223H1A00B8	YELUBANDE VINAY
	223H1A00B9	YELURI ANUSHA

% of Attendance	Sessional Marks Theory I	Theory II	Practical I	Practical II
94.7	19		13	13
89.4	20		12	13
89.4	18		13	13
94.7	19		13	12
100	20		13	12
100	21		13	12
100	18		13	14
100	17		12	12
94.7	21		13	13
94.7	22		12	13
94.7	22		13	14
94.7	21		13	12
94.7	20		11	13
94.7	21		12	13
94.7	18		13	13
100	21		12	12
94.7	20		12	13
94.7	21		12	12
94.7	21		13	13
94.7	20		13	13
94.7	22		13	13
94.7	21		12	13
100	19		11	11
94.7	23		14	14
100	23		14	14
94.7	23		13	14
94.7	19		13	13
94.7	21		12	12
94.7	22		13	14

ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy

BP 207 P. HUMAN ANATOMY AND PHYSIOLOGY (Practical)

4 Hours/week

Practical physiology is complimentary to the theoretical discussions in physiology. Practicals allow the verification of physiological processes discussed in theory classes through experiments on living tissue, intact animals or normal human beings. This is helpful for developing an insight on the subject.

1. Introduction to hemocytometry.
2. Enumeration of white blood cell (WBC) count
3. Enumeration of total red blood corpuscles (RBC) count
4. Determination of bleeding time
5. Determination of clotting time
6. Estimation of hemoglobin content
7. Determination of blood group.
8. Determination of erythrocyte sedimentation rate (ESR).
9. Determination of heart rate and pulse rate.
10. Recording of blood pressure.
11. Determination of tidal volume and vital capacity.
12. Study of digestive, respiratory, cardiovascular systems, urinary and reproductive systems with the help of models, charts and specimens.
13. Recording of basal mass index
14. Study of family planning devices and pregnancy diagnosis test.
15. Demonstration of total blood count by cell analyser
16. Permanent slides of vital organs and gonads.

Recommended Books (Latest Editions)

1. Essentials of Medical Physiology by K. Sembulingam and P. Sembulingam. Jaypee brothers medical publishers, New Delhi.
2. Anatomy and Physiology in Health and Illness by Kathleen J.W. Wilson, Churchill Livingstone, New York
3. Physiological basis of Medical Practice-Best and Tailor. Williams & Wilkins Co,Riverview,MI USA

4. Text book of Medical Physiology- Arthur C,Guyton andJohn.E. Hall. Miamisburg, OH, U.S.A.
5. Principles of Anatomy and Physiology by Tortora Grabowski. Palmetto, GA, U.S.A.
6. Textbook of Human Histology by Inderbir Singh, Jaypee brothers medical publishers, New Delhi.
7. Textbook of Practical Physiology by C.L. Ghai, Jaypee brothers medical publishers, New Delhi.
8. Practical workbook of Human Physiology by K. Srinageswari and Rajeev Sharma, Jaypee brother's medical publishers, New Delhi.

Reference Books:

1. Physiological basis of Medical Practice-Best and Tailor. Williams & Wilkins Co, Riverview, MI USA
2. Text book of Medical Physiology- Arthur C, Guyton and John. E. Hall. Miamisburg, OH, U.S.A.
3. Human Physiology (vol 1 and 2) by Dr. C.C. Chatterrje ,Academic Publishers Kolkata

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM - 533 437

BP 207P HUMAN ANOTAMY AND PHYSIOLOGY

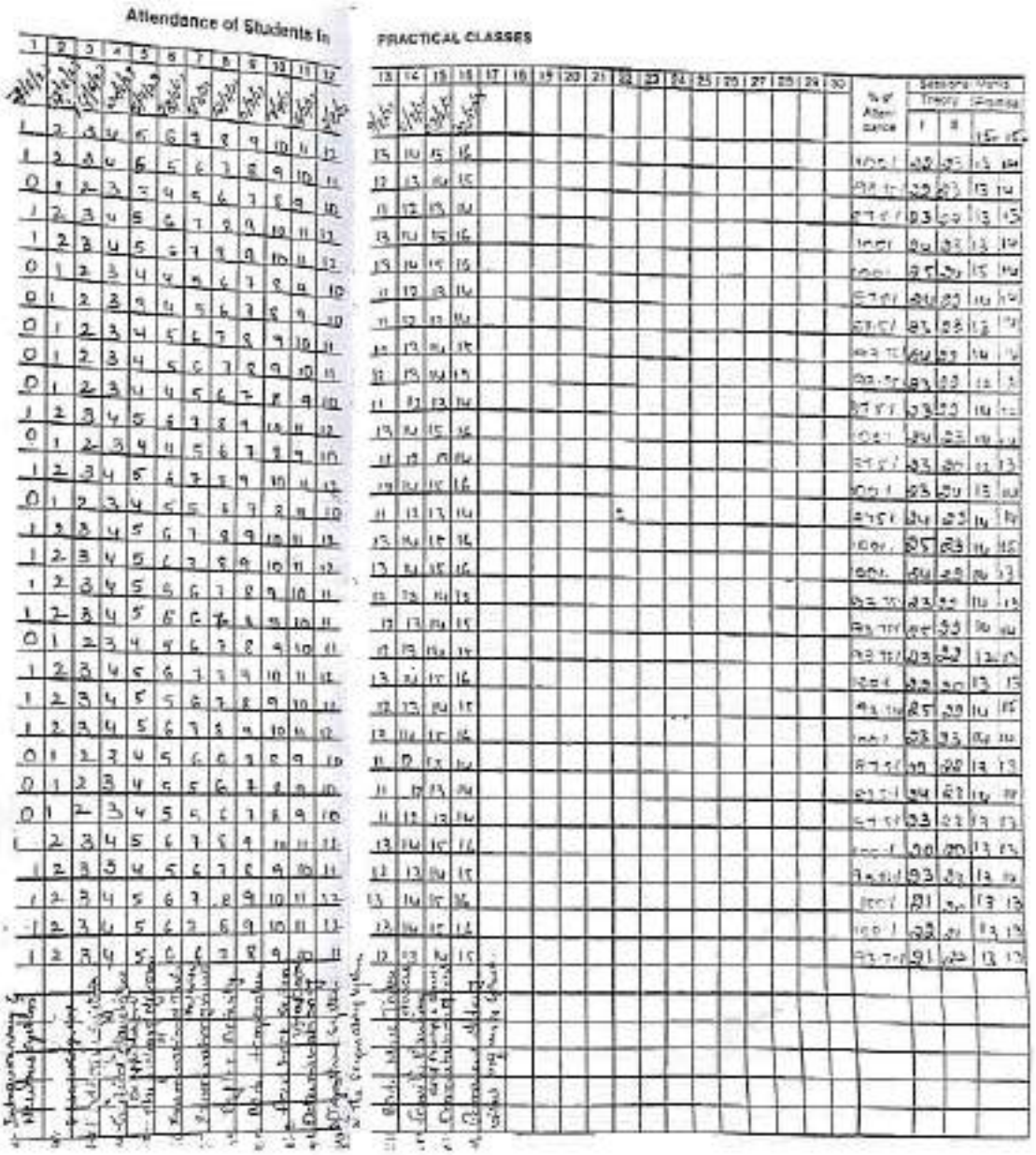
PRACTICAL

ATTENDANCE OF STUD

Attendance of Students in

PRACTICAL CLASSES

Sl. No.	Regd. No.	Name
	22301R0001	A. VEERA RAMA SAI
	22301R0002	ADURU TEJASWINI
	22301R0003	ARUGULLA SOWMYA
	22301R0004	ASHA DEEPTHI GURUGUBILLI
	22301R0005	BARAVA RAMYA
	22301R0006	BINGU SRINIVASA RAO
	22301R0007	CHIKKALA BHAVANI
	22301R0008	CH. P SRIKANTH DHANA SAI
	22301R0009	CH. GRACE SUBHASHINI
	22301R0010	CHODISETTI NAGA SATYA SR
	22301R0011	DAVALA TANUSHA
	22301R0012	D. GAYATRI SRI VARSHITHA
	22301R0013	DONEPUDI SWATHI
	22301R0014	V. SIDDU MANIKANTA KUMA
	22301R0015	ELLANKI BHAVANI
	22301R0016	GADDE MANIA DURGA BHAVA
	22301R0017	GEMBALI LAXMI MADHAVI
	22301R0018	GIDLA SATYA SUNICE
	22301R0019	GOLLAVILLI ESTHERU RANI
	22301R0020	GUDALA HEMA NANDHINI
	22301R0021	GUTHULA CHANDRA HASINI
	22301R0022	INAGADAPU SUSHMA
	22301R0023	KATAKAM PRAVALLIKA
	22301R0024	KESANA DINESH KUMAR
	22301R0025	KONDAPALLI BHAVANI
	22301R0026	KOTHAPALLI JAGADEESWAI
	22301R0027	KUDIPUDI SATYA DURGA
	22301R0028	KURA SARASWATHI
	22301R0029	KURRE DEEPIKA
	22301R0030	MADAKAMI YAMINI



PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM- 533 437

ATTENDANCE OF STUD

Attendance of Students in PRACTICAL CLASSES

S.No	Regd. No.	
		DL. V D SIVALAKSHMI
		M. KRISHNA VENI
		VEERALA SURYA BHASKAR
		MORTHA KOSHIKI
		NAGALLA SEETHA
		SANALA DIVYA
		NAKKA DEVID KAMAL
		SALLAGRAVANI
		SATI DHANVARSH MANGADE
		S. MOHANA JYOTHI
		P. DURGA SRI SURYA KISHOR
		PADALA VIJAYA DURGA
		PAKKURTHI PRAKASH
		PANDA PUSHPALATHA
		P. RAMA SIVA GANGA BHAV
		PILLI BHARATHI
		PILLI KIRAN KUMAR
		PILLWAR SRUTHI
		PINAPOTU SATYA SAI DURGA
		POLURU NAYAB RASOOL
		RAGHUNANDA BINDU MADH
		ROTTA TANMAYYA
		SADHANALA CHAKRADHAR
		SETTI RAMA
		SHEIK SOFIA BEGUM
		SURLA SRISHA VEERA RAM
		TADI BHAVYA SRI
		THATA NARENDRA
		THIRUMALARAJU SRI HARSI
		UPPADA SREE KAVYA

No. of Absences	Sessional Marks		
	Theory		Practical
	I	II	
84	24	28	13
100	24	23	11
83	22	23	13
83	24	24	14
100	25	20	13
87	20	20	12
83	20	14	14
83	20	13	13
84	21	11	15
80	22	13	15
83	22	13	13
82	19	15	15
84	24	13	13
87	19	13	12
83	23	13	10
81	20	13	14
80	23	13	13
80	19	13	13
87	20	12	14
85	21	12	10
85	23	13	13
84	20	13	13
88	22	14	10
81	20	14	14
83	19	14	13
83	23	15	10
81	19	12	11
80	23	13	13
83	20	15	14

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BP208P. PHARMACEUTICAL ORGANIC CHEMISTRY -I (Practical)

4 Hours / week

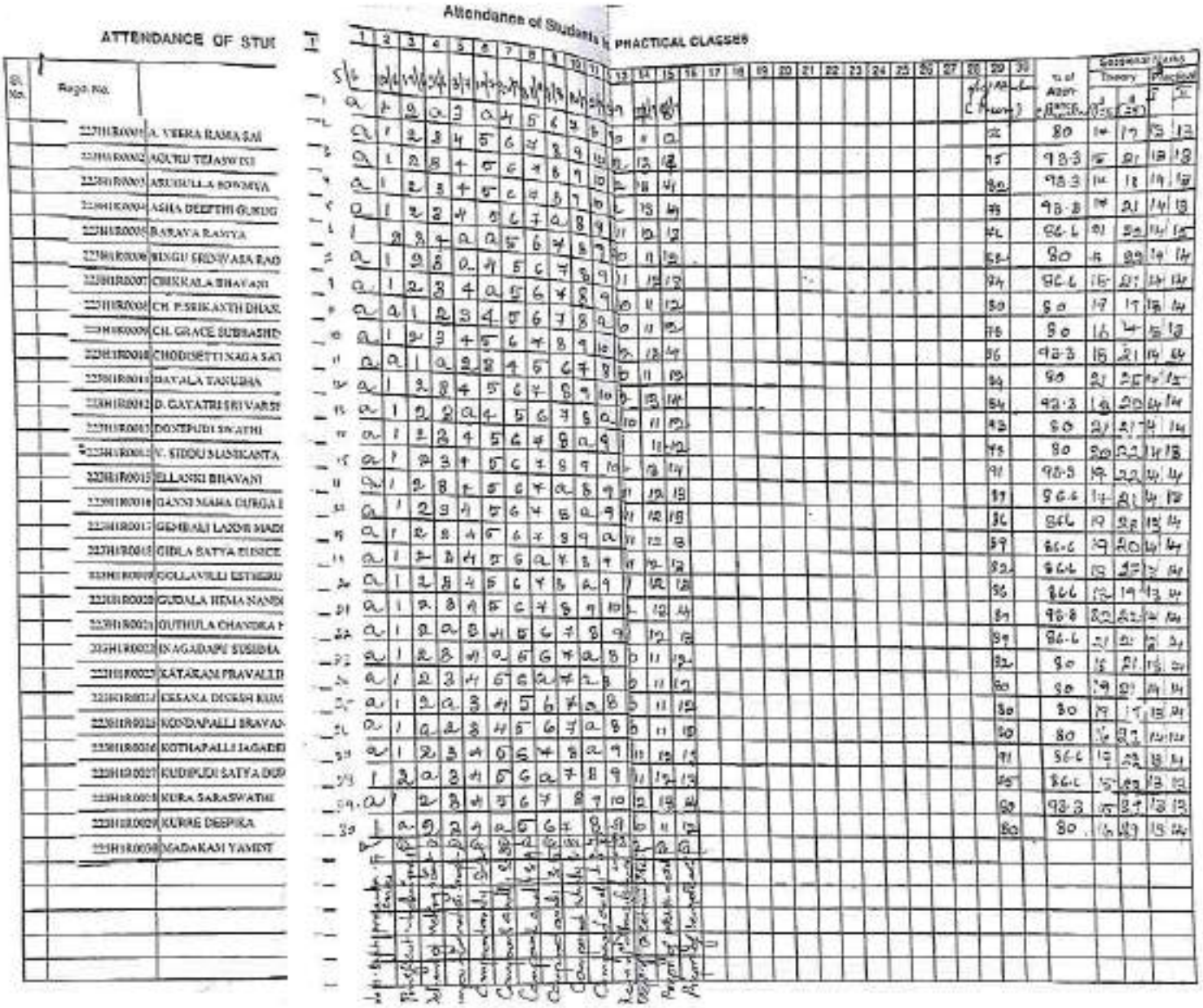
1. Systematic qualitative analysis of unknown organic compounds like
    1. Preliminary test: Color, odour, aliphatic/aromatic compounds, saturation and unsaturation, etc.
    2. Detection of elements like Nitrogen, Sulphur and Halogen by Lassaigne's test
    3. Solubility test
    4. Functional group test like Phenols, Amides/ Urea, Carbohydrates, Amines, Carboxylic acids, Aldehydes and Ketones, Alcohols, Esters, Aromatic and Halogenated Hydrocarbons, Nitro compounds and Anilides.
    5. Melting point/Boiling point of organic compounds
    6. Identification of the unknown compound from the literature using melting point/ boiling point.
    7. Preparation of the derivatives and confirmation of the unknown compound by melting point/ boiling point.
    8. Minimum 5 unknown organic compounds to be analysed systematically.
2. Preparation of suitable solid derivatives from organic compounds
3. Construction of molecular models

Recommended Books (Latest Editions)

1. Organic Chemistry by Morrison and Boyd
2. Organic Chemistry by I.L. Finar , Volume-I
3. Textbook of Organic Chemistry by B.S. Bahl & Arun Bahl.
4. Organic Chemistry by P.L.Soni
5. Practical Organic Chemistry by Mann and Saunders.
6. Vogel's text book of Practical Organic Chemistry
7. Advanced Practical organic chemistry by N.K.Vishnoi.
8. Introduction to Organic Laboratory techniques by Pavia, Lampman and Kriz.
9. Reaction and reaction mechanism by Ahluwaliah/Chatwal.

BP208PHARMACEUTICAL ORGANIC CHEMISTRY - I

PRACTICAL



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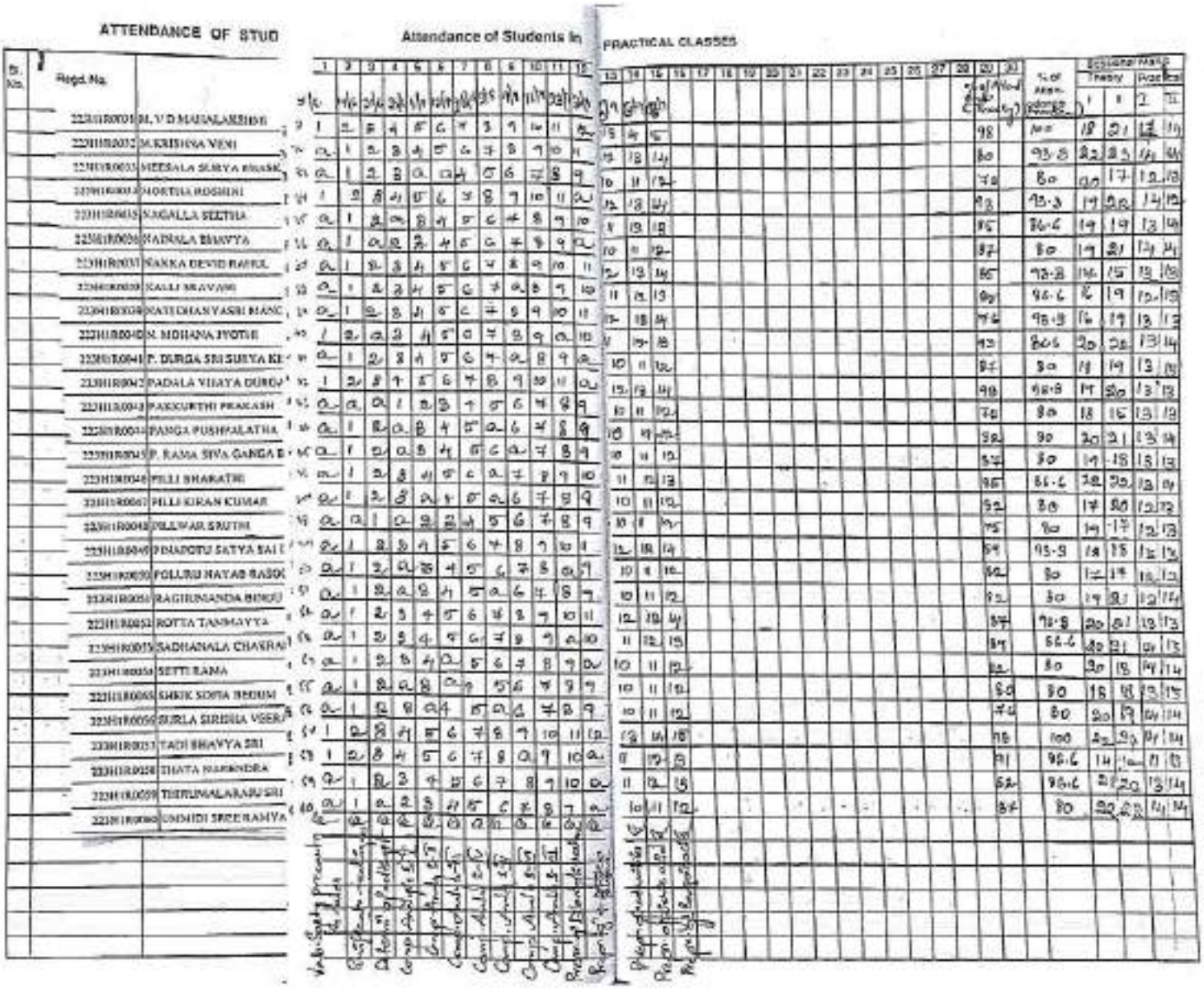

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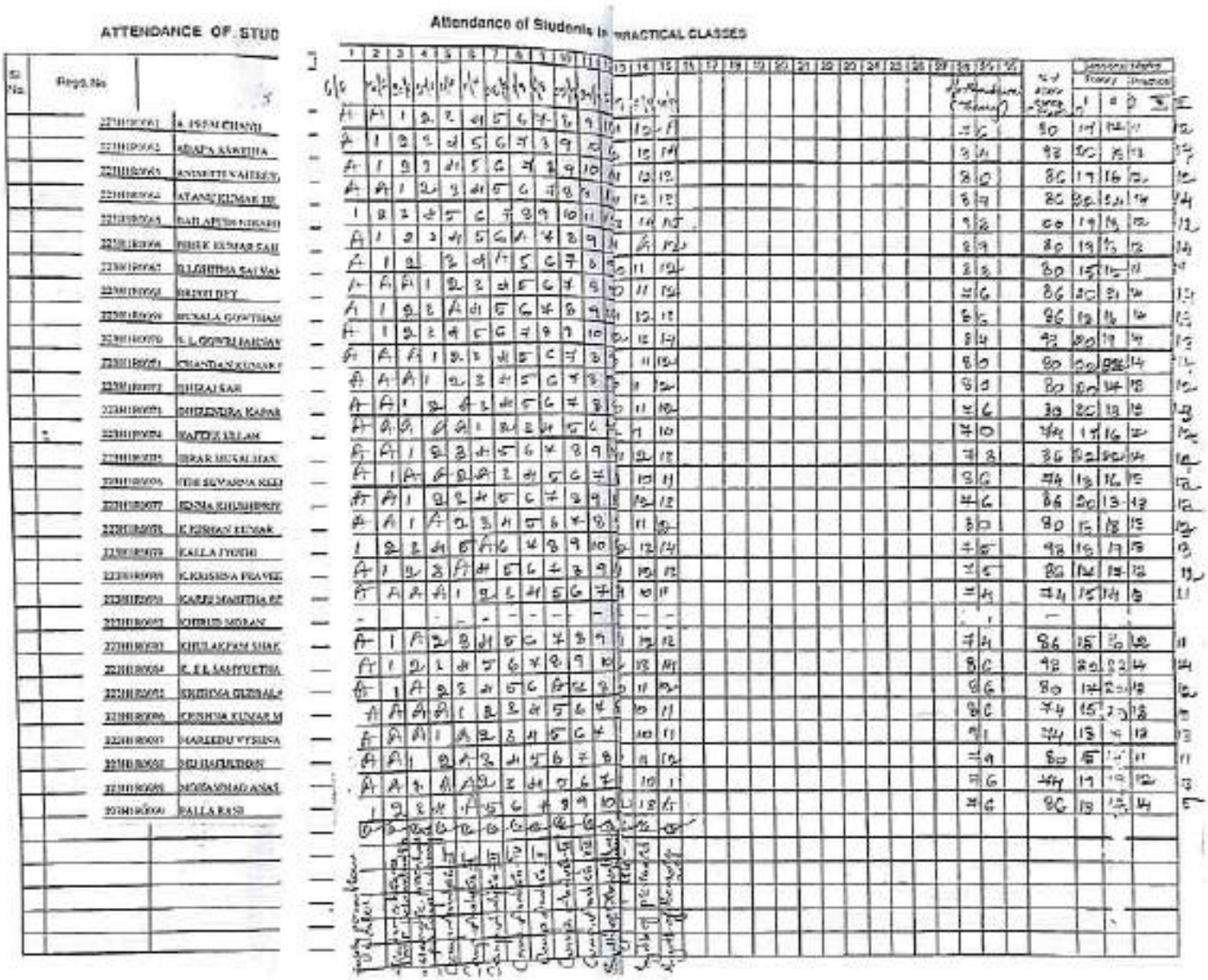
SURAMPALEM



ADITYA COLLEGE OF PHARMACY SURAMPALEM

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ATTENDANCE OF STUD

Attendance of Students in PRACTICAL CLASSES

Sl No	Regd. No.	Name
1	223I1H0041	PILLA SANTHOSH
2	223I1H0042	PRIYANKOSH H/1[illegible]
3	223I1H0043	G. SATYA DEVI
4	223I1H0044	T. DIVYA SAI RAMA
5	223I1H0045	KANI[illegible]ABYA JOSN
6	223I1H0046	RANEEM KHATUN
7	223I1H0047	RAVI PANDEY
8	223I1H0048	[illegible]YA KUMARI MISH
9	223I1H0049	R. VENKATA LAKSH
10	223I1H0050	SANTOSH KUMAR SI
11	223I1H0051	[illegible]AYYAN JHA
12	223I1H0052	GODAGAMA KISHAN
13	223I1H0053	GOVARDHINAM
14	223I1H0054	[illegible]UMAR MAJI
15	223I1H0055	CH. KARANNAPURI
16	223I1H0056	SUMIT KUSHWAHA
17	223I1H0057	TANPAKSHA PRM SA
18	223I1H0058	TANU PRIYA
19	223I1H0059	VAIJA JINANALAKS
20	223I1H0060	V SSS PRIYA DURGA
21	223I1H0061	[illegible]UNABOYINA KAV
22	223I1H0062	V. [illegible]ANTA SAI
23	223I1H0063	VELLORI TINNU
24	223I1H0064	VINNA [illegible]HER DAT
25	223I1H0065	VALLA DASSARITH
26	223I1H0066	YAMJALA SAI DAT
27	223I1H0067	Y. SURYA PRAKASH
28	223I1H0068	YELLURI[illegible] VINAY
29	223I1H0069	YELURI ANUSH

Sl No	Internal Marks Theory I	Theory II	Practical	Total
1	19	20	18	
2	20	20	20	
3	18	18	19	
4	18	19	15	
5	19	19	14	
6	16	20	15	
7	17	20	18	
8	18	01	12	
9	19	20	14	
10	19	20	18	
11	19	20	14	
12	19	18	14	
13	19	17	13	
14	20	20	19	
15	19	20	13	
16	19	18	14	
17	18	17	13	
18	20	17	13	
19	18	21	14	
20	18	18	12	
21	18	19	14	
22	18	21	14	
23	15	18	18	
24	15	19	10	
25	20	21	14	
26	20	24	14	
27	20	08	14	
28	18	19	11	
29	19	21	13	
30	20	24	14	

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UNIT V **07 Hours**

- **Enzymes**

  Introduction, properties, nomenclature and IUB classification of enzymes

  Enzyme kinetics (Michaelis plot, Line Weaver Burke plot)

  Enzyme inhibitors with examples

  Regulation of enzymes: enzyme induction and repression, allosteric enzymes regulation

  Therapeutic and diagnostic applications of enzymes and isoenzymes

  Coenzymes –Structure and biochemical functions

BP 209 P. BIOCHEMISTRY (Practical)

4 Hours / Week

1. Qualitative analysis of carbohydrates (Glucose, Fructose, Lactose, Maltose, Sucrose and starch)
2. Identification tests for Proteins (albumin and Casein)
3. Quantitative analysis of reducing sugars (DNSA method) and Proteins (Biuret method)
4. Qualitative analysis of urine for abnormal constituents
5. Determination of blood creatinine
6. Determination of blood sugar
7. Determination of serum total cholesterol
8. Preparation of buffer solution and measurement of pH
9. Study of enzymatic hydrolysis of starch
10. Determination of Salivary amylase activity
11. Study the effect of Temperature on Salivary amylase activity.
12. Study the effect of substrate concentration on salivary amylase activity.

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Recommended Books (Latest Editions)

1. Principles of Biochemistry by Lehninger.
2. Harper's Biochemistry by Robert K. Murry, Daryl K. Granner and Victor W. Rodwell.
3. Biochemistry by Stryer.
4. Biochemistry by D. Satyanarayan and U.Chakrapani
5. Textbook of Biochemistry by Rama Rao.
6. Textbook of Biochemistry by Deb.
7. Outlines of Biochemistry by Conn and Stumpf
8. Practical Biochemistry by R.C. Gupta and S. Bhargavan.
9. Introduction of Practical Biochemistry by David T. Plummer. (3rd Edition)
10. Practical Biochemistry for Medical students by Rajagopal and Ramakrishna.
11. Practical Biochemistry by Harold Varley.

BP 204T.PATHOPHYSIOLOGY (THEORY)

45Hours

Scope: Pathophysiology is the study of causes of diseases and reactions of the body to such disease producing causes.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 required to practice medicine safely, confidently, rationally and effectively.

Objectives: Upon completion of the subject student shall be able to –

1. Describe the etiology and pathogenesis of the selected disease states;
2. Name the signs and symptoms of the diseases; and
3. Mention the complications of the diseases.

Course content:

Unit I **10Hours**

- **Basic principles of Cell injury and Adaptation:**
  Introduction, definitions, Homeostasis, Components and Types of Feedback systems, Causes of cellular injury,Pathogenesis (Cell membrane damage, Mitochondrial damage, Ribosome damage, Nuclear damage),Morphology of cell injury – Adaptive changes (Atrophy, Hypertrophy, hyperplasia, Metaplasia, Dysplasia),Cell swelling, Intra cellular accumulation, Calcification, Enzyme leakage and Cell Death Acidosis &Alkalosis,Electrolyte imbalance

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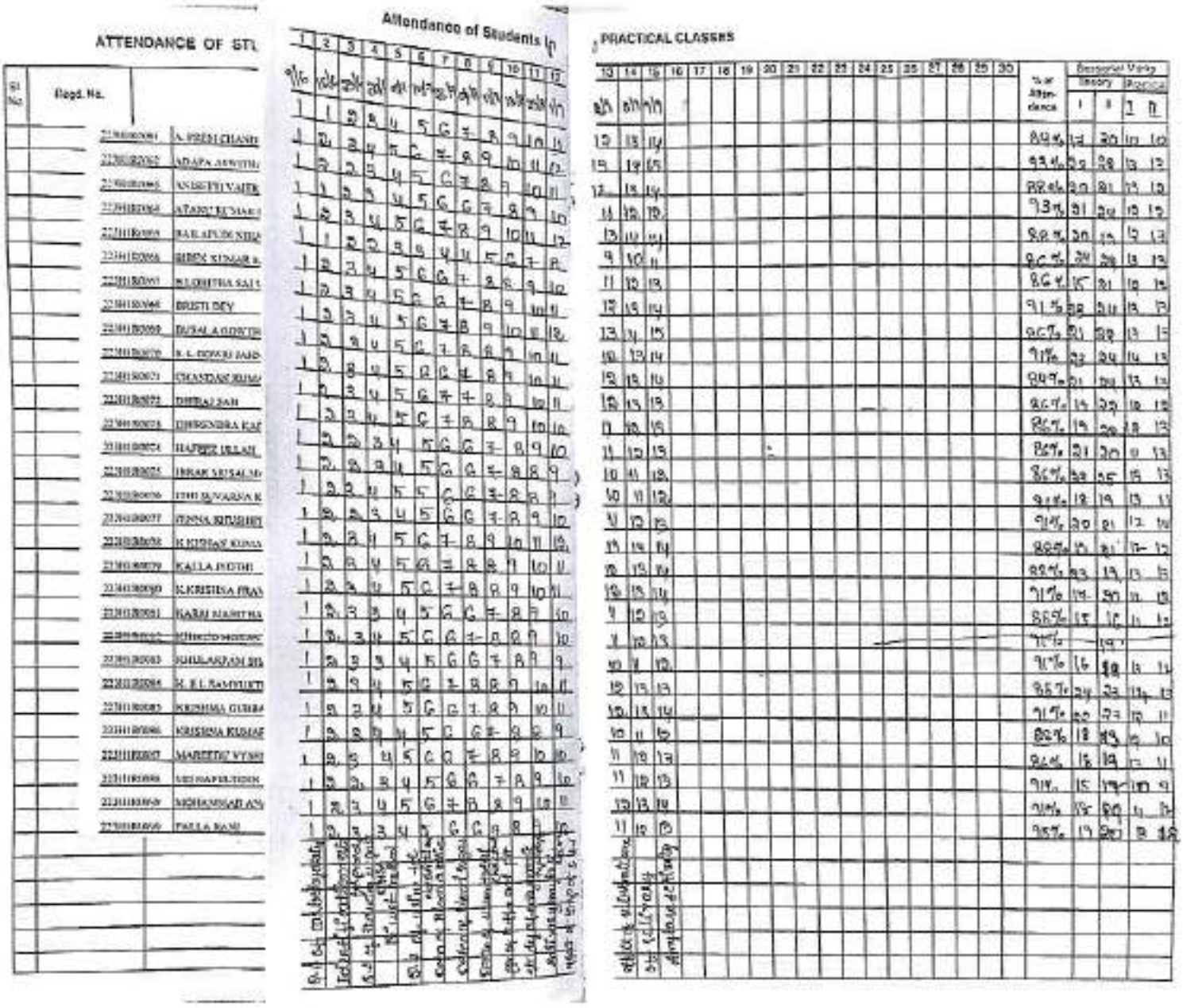
BP 209 P BIOCHEMISTRY PRACTICAL



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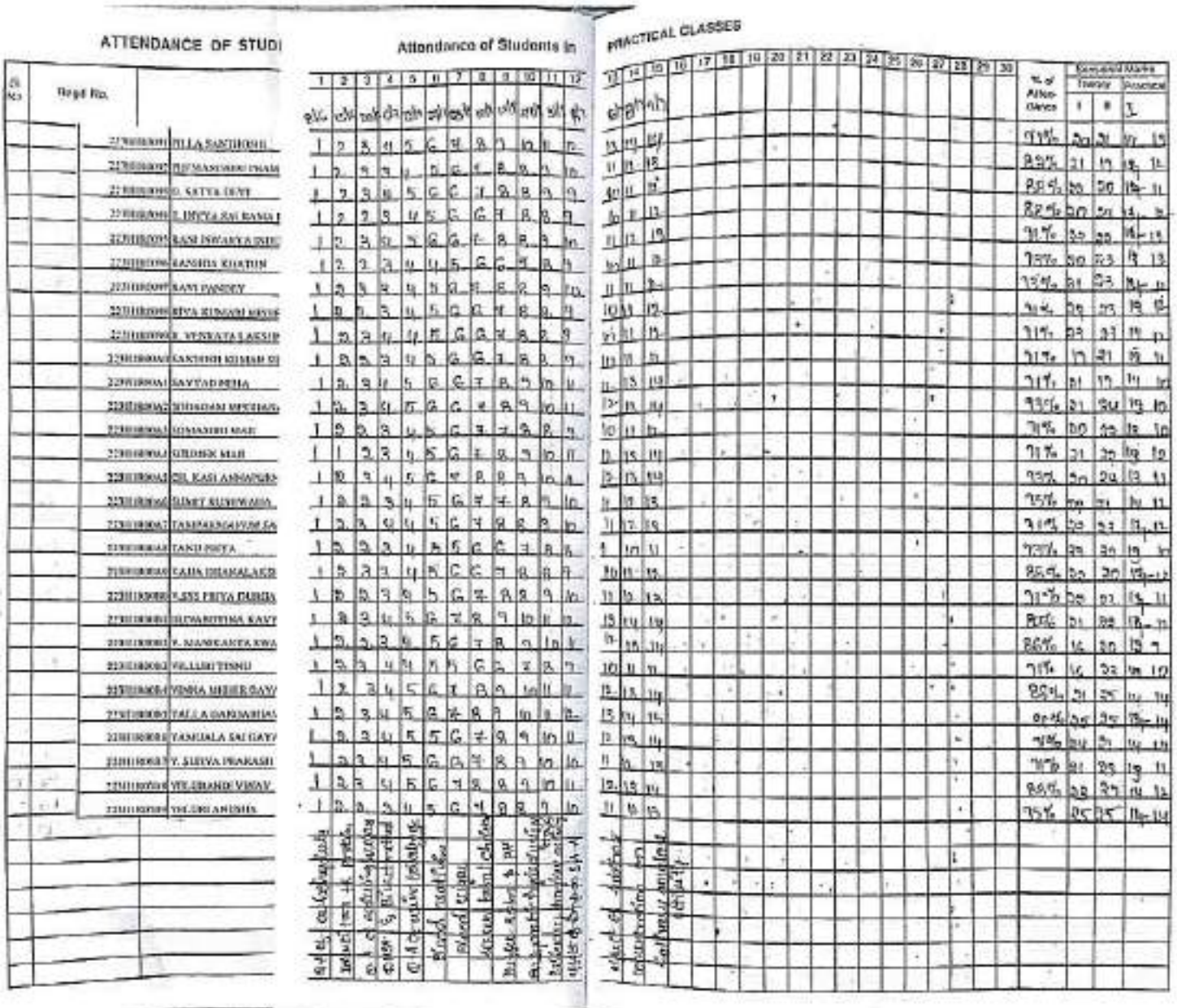

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BP210P. COMPUTER APPLICATIONS IN PHARMACY (Practical)

1. Design a questionnaire using a word processing package to gather information about a particular disease.
2. Create a HTML web page to show personal information.
3. Retrieve the information of a drug and its adverse effects using online tools
4. Creating mailing labels Using Label Wizard , generating label in MS WORD
5. Create a database in MS Access to store the patient information with the required fields Using access
6. Design a form in MS Access to view, add, delete and modify the patient record in the database
7. Generating report and printing the report from patient database
8. Creating invoice table using – MS Access
9. Drug information storage and retrieval using MS Access
10. Creating and working with queries in MS Access
11. Exporting Tables, Queries, Forms and Reports to web pages
12. Exporting Tables, Queries, Forms and Reports to XML pages

Recommended books (Latest edition):

1. Computer Application in Pharmacy – William E.Fassett –Lea and Febiger, 600 South Washington Square, USA, (215) 922-1330.
2. Computer Application in Pharmaceutical Research and Development –Sean Ekins – Wiley-Interscience, A John Willey and Sons, INC., Publication, USA
3. Bioinformatics (Concept, Skills and Applications) – S.C.Rastogi-CBS Publishers and Distributors, 4596/1- A, 11 Darya Gani, New Delhi – 110 002(INDIA)
4. Microsoft office Access - 2003, Application Development Using VBA, SQL Server, DAP and Infopath – Cary N.Prague – Wiley Dreamtech India (P) Ltd., 4435/7, Ansari Road, Daryagani, New Delhi - 110002

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BP 210P COMPUTER APPLICATIONS IN PHARMACY PRACTICAL

ATTENDANCE OF STUI

Attendance of Students in PRACTICAL CLASSES

Sl. No.	Regd. No.	
1	223111R0001	A. VEERA RAMA SAI
2	223111R0002	ADURI PUJASWINI
3	223111R0003	ANUGULLA SOWMYA
4	223111R0004	ASHA DEEPTHI GURUGUBII
5	223111R0005	BARAVA RADIYA
6	223111R0006	BUDDU SRINIVASA RAO
7	223111R0007	CHEKKALA BHAVANI
8	223111R0008	CH. P.SRIKANTH DHANA SA
9	223111R0009	CH. GRACE SUSHASHINI
10	223111R0010	CHODISETTI NAGA SATYA
11	223111R0011	DAVALA TANUSRIA
12	223111R0012	D. GAYATRI SRI VARSHITH
13	223111R0013	DONEPUDI SWATHI
14	223111R0014	V. SIDDU MANIKANTA KUM
15	223111R0015	ELLANKI BHAVANI
16	223111R0016	GANNAMANI DURGA BHA
17	223111R0017	GEMBALI LAXMI MADHAV
18	223111R0018	GIDLA SATYA EUNICE
19	223111R0019	GOLLAVILLI ESTHERU RAI
20	223111R0020	GUDALA REMA NANDINI
21	223111R0021	GUTHULA CHANDRA HASI
22	223111R0022	INAGADAPU SUSHMA
23	223111R0023	KATAKAM PRAVALLIKA
24	223111R0024	KESANA DINESH KUMAR
25	223111R0025	KONDAPALLI SRAVANI
26	223111R0026	KOTHAPALLI JAGADEESW
27	223111R0027	KUDIPUDI SATYA DURGA
28	223111R0028	KURA SARASWATHI
29	223111R0029	KURRI DEEPIKA
30	223111R0030	MADAKAM YAMINI

% of Attendance	Sessional Marks Theory I	Theory II	Practical I	Practical II
80	81	23	12	39
99	26	04	16	38
96	26	26	19	36
85	23	21	13	35
86	28	29	15	39
85	23	26	19	36
87	29	24	18	32
81	26	24	19	31
81	20	19	11	34
89	26	17	18	35
82	25	23	16	37
95	17	16	18	34
90	25	23	13	37
81	23	19	16	37
99	28	20	13	38
90	20	18	16	37
91	23	21	15	31
96	23	26	17	37
95	25	23	14	35
91	20	21	13	36
96	28	26	17	36
82	20	22	18	20
81	21	20	14	20
85	22	19	15	32
89	23	23	15	37
80	25	23	15	32
97	20	24	16	37
80	20	16	15	20
96	17	20	13	26
81	16	20	14	28

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ATTENDANCE OF STUDI

Attendance of Students In

PRACTICAL CLASSES

Sl. No.	Regd. No	
	223H1R0021	M. V D HARILAKSHMI
	223H1R0022	D KRISHNA VENI
	223H1R0023	DEEKALA SURYA BHASKAR
	223H1R0024	DORTHA ROSHINI
	223H1R0025	KAGALLA SEETHA
	223H1R0026	KAINALA BHAVYA
	223H1R0027	KAKKA DEVID RAHUL
	223H1R0028	KALLI SRAVANI
	223H1R0029	KATI BHANYASRI MANGAI
	223H1R0040	K. MOHANA JYOTHI
	223H1R0041	P. DURGA SRI SURYA KISH
	223H1R0042	PADALA VIJAYA DURGA
	223H1R0043	PAKKURTHI PRAKASH
	223H1R0044	PANGA PUSHPALATHA
	223H1R0045	P. RAMA SIVA GANGA BHA
	223H1R0046	PILLI BHARATHI
	223H1R0047	PILLI KIRAN KUMAR
	223H1R0048	PILLVAR SRUTHI
	223H1R0049	PINAPOTU SATYA SAI DURG
	223H1R0050	POLURU NAYAN KAMOL
	223H1R0051	RAGHUNANDA BINDU MAI
	223H1R0052	ROTTA TAMBAYYA
	223H1R0053	SADHANALA CHAKRADHA
	223H1R0054	SETTI RAMA
	223H1R0055	SHAIK SOFIA BEGUM
	223H1R0056	SURLA SIRISHA VEERA RAJ
	223H1R0057	TADI BHAVYA SRI
	223H1R0058	THATA NARENDRA
	223H1R0059	THIRUMALARAJU SRI HARI
	223H1R0060	UPPADI SREE RAMYA

% of Attendance	Sessional Marks Theory I	Theory II	Practical I	Practical II
99	27	21	24	22
90	28	25	28	28
94	28	25	25	24
93	25	26	24	26
85	29	24	22	26
85	29	26	28	30
85	25	18	22	25
92	26	20	24	30
86	26	18	25	26
90	25	26	27	28
91	28	17	22	22
99	21	20	23	23
80	28	17	22	20
90	22	24	20	25
86	24	21	24	25
89	22	21	26	24
83	29	21	25	25
80	28	23	25	25
96	21	22	25	26
80	27	21	22	20
88	25	24	24	25
95	29	21	23	24
91	21	24	22	24
83	25	23	23	26
94	26	25	28	30
80	28	25	20	26
99	27	28	27	28
95	23	25	24	26
87	22	26	25	27
90	27	22	25	23

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ATTENDANCE OF STUD

Attendance of Students in

PRACTICAL CLASSES

Sl. No.	Regd. No.	
	223H1R0061	KOHINTA Rupa Ch
	223H1R0062	ADAPA ASWITHA
	223H1R0063	ANISETTI VAITHEYA
	223H1R0064	ATAVU KUMAR DE
	223H1R0065	BALAPUDI MIHARI
	223H1R0066	BIDEK KUMAR SAH
	223H1R0067	BODHITHA SAI VAR
	223H1R0068	BRISTI DEY
	223H1R0069	BUSKULA GOWTHAM
	223H1R0070	C. LAKSHMI GOWR
	223H1R0071	CHANDANI KUMAR
	223H1R0072	DHIRAJ SAH
	223H1R0073	DHIRENDRA KAPA
	223H1R0074	HAFEEZ ULLAH
	223H1R0075	IDRAR MUSALMA
	223H1R0076	ITHI SUVARNA KE
	223H1R0077	JINNA KHUSHBU
	223H1R0078	K KISHAN KUMAR
	223H1R0079	KALLA JYOTHI
	223H1R0080	KATNAM KRISHNA
	223H1R0081	KARNI MAHITHA R
	223H1R0082	KHARUD MOHAN
	223H1R0083	KHULAKPAM SHAI
	223H1R0084	K. C LAKSHMI SAI
	223H1R0085	KRISHNA GUBBAL
	223H1R0086	KRISHNA KUMAR
	223H1R0087	MARGEDU VYSHN
	223H1R0088	MD HAFIUDDIN
	223H1R0089	MOHAMMAD ANI
	223H1R0090	PALLA RAVI

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ATTENDANCE OF STUI

Attendance of Students In

PRACTICAL CLASSES

Regd. No.	
223H1R0091	PALA SANTHOS
223H1R0092	PREMANDISHU
223H1R0093	GANDHAM SAT
223H1R0094	T. DIVYA SAI RA
223H1R0095	KAM BHAVYA
223H1R0096	RANI DA KHATR
223H1R0097	RAVI PANDEY
223H1R0098	RIYA KUMARI M
223H1R0099	RYALI VENKATA
223H1R00A0	SANTOSH KUMA
223H1R00A1	SAYYAD HEHA
223H1R00A2	SODAGAM MOI
223H1R00A3	SOWDHRI MAI
223H1R00A4	SOUMEN MIDI
223H1R00A5	CHANDANA KAS
223H1R00A6	SUMIT KUSHWA
223H1R00A7	TAMPAKWAYSH
223H1R00A8	TANU PRIYA
223H1R00A9	VAKA DHANVAJ
223H1R00B0	V. S S SRI PRIYA
223H1R00B1	DUVVADDIVINA K
223H1R00B2	V. MANICANTA
223H1R00B3	VELLORI TANU
223H1R00B4	VENNA MEHAR C
223H1R00B5	KALLA GANGAR
223H1R00B6	KANUKALA SAI G
223H1R00B7	L. SURYA PRAD
223H1R00B8	MELLIBANDI VIN
223H1R00B9	PELLURI ANUSHA

	No. of Attendance	Sessional Marks Theory I	Theory II	Practical I	Practical II
A1	95	16	17	23	26
A2	80	16	13	21	23
A3	96	16	16	21	28
A4	92	15	16	21	25
A5	81	15	17	21	26
A6	90	15	26	23	29
A7	80	20	18	21	25
A8	80	16	15	21	27
A9	85	26	21	26	25
AA	80	19	23	21	22
AB	85	26	26	25	26
AC	80	19	22	21	25
AD	80	16	22	21	28
AE	81	19	24	23	26
AF	81	20	25	21	25
AG	81	23	28	23	26
AH	87	19	23	25	29
AI	81	20	23	26	22
AJ	86	25	26	25	25
AK	93	22	20	23	28
AL	93	27	23	26	25
AM	81	19	20	20	25
AN	80	18	16	19	21
AO	80	23	24	20	26
AP	92	27	26	28	28
AQ	96	28	29	25	28
AR	80	18	20	21	22
AS	86	20	22	23	25
AT	92	29	28	27	26

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BP305P. PHARMACEUTICAL ORGANIC CHEMISTRY -II (Practical)

4 Hrs/week

I Experiments involving laboratory techniques

- Recrystallization
- Steam distillation

II Determination of following oil values (including standardization of reagents)

- Acid value
- Saponification value
- Iodine value

III **Preparation of compounds**

- Benzanilide/Phenyl benzoate/Acetanilide from Aniline/ Phenol /Aniline by acylation reaction.
- 2,4,6-Tribromo aniline/Para bromo acetanilide from Aniline/
- Acetanilide by halogenation (Bromination) reaction.
- 5-Nitro salicylic acid/Meta di nitro benzene from Salicylic acid / Nitro benzene by nitration reaction.
- Benzoic acid from Benzyl chloride by oxidation reaction.
- Benzoic acid/ Salicylic acid from alkyl benzoate/ alkyl salicylate by hydrolysis reaction.
- 1-Phenyl azo-2-napthol from Aniline by diazotization and coupling reactions.
- Benzil from Benzoin by oxidation reaction.
- Dibenzal acetone from Benzaldehyde by Claison Schmidt reaction
- Cinnammic acid from Benzaldehyde by Perkin reaction
- *P*-Iodo benzoic acid from *P*-amino benzoic acid

Recommended Books (Latest Editions)

1. Organic Chemistry by Morrison and Boyd
2. Organic Chemistry by I.L. Finar , Volume-I
3. Textbook of Organic Chemistry by B.S. Bahl & Arun Bahl.
4. Organic Chemistry by P.L.Soni
5. Practical Organic Chemistry by Mann and Saunders.
6. Vogel's text book of Practical Organic Chemistry
7. Advanced Practical organic chemistry by N.K.Vishnoi.

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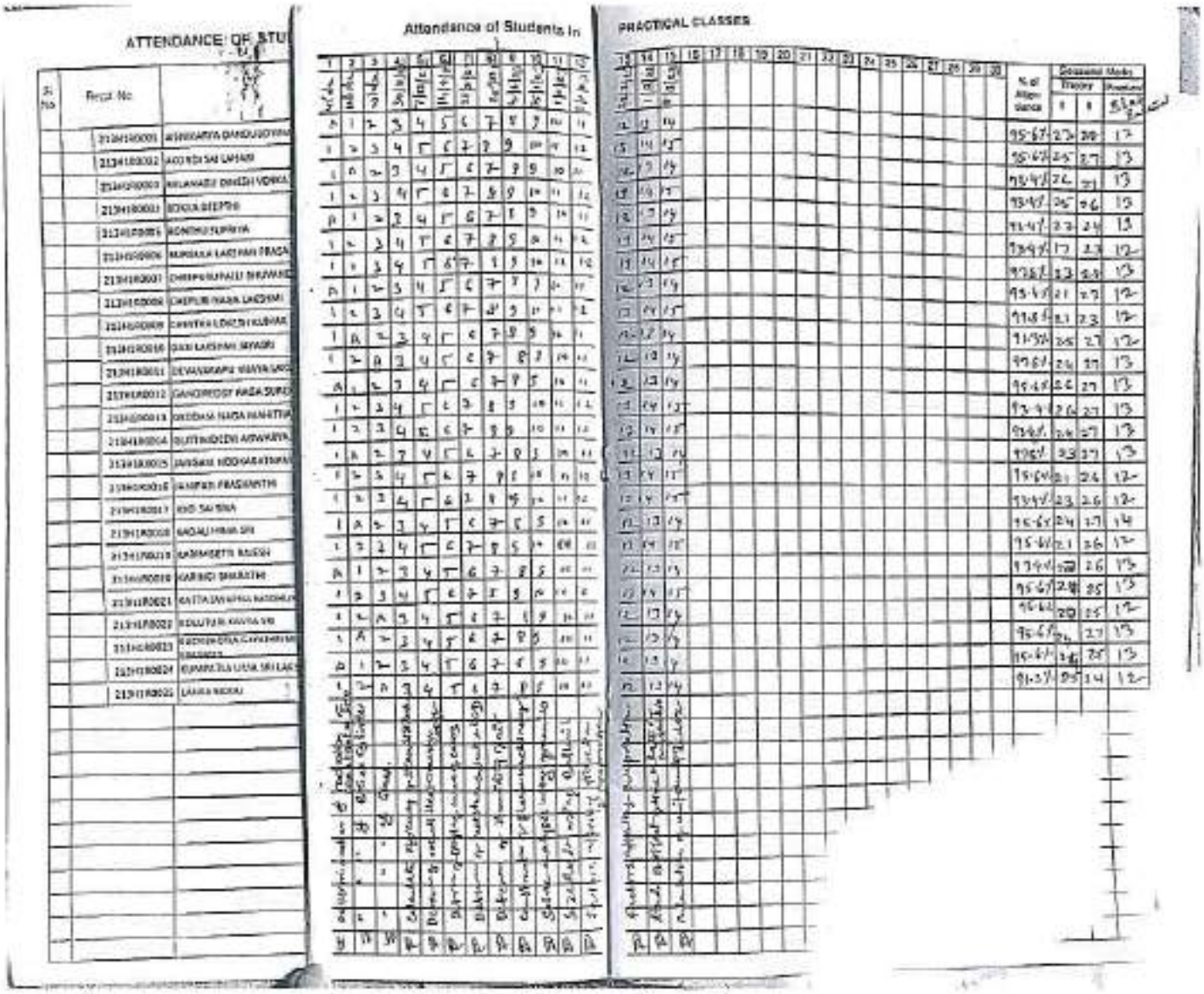
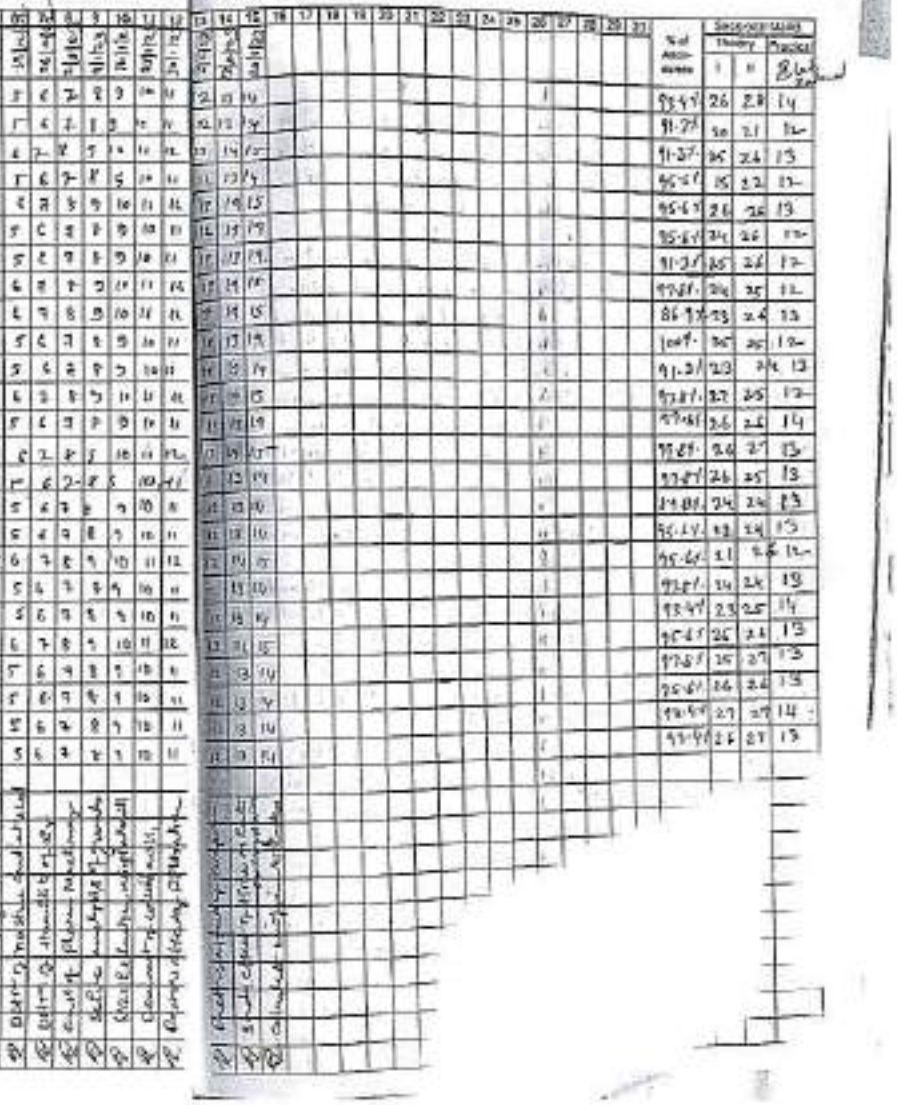
P305P II/I B.PHARM PHARMACEUTICAL ORGANIC CHEMISTRY II PRACTICAL - 2



ATTENDANCE OF STU

Attendance of Students in PRACTICAL CLASSES

Sl. No.	Regd. No.	
	213H1R0026	VALLA RAVIDARMA
	213H1R0027	VEERA KIRAN KUMAR
	213H1R0028	VEGALLAPU SWAPNA
	213H1R0029	MOHAMMAD SHAHA
	213H1R0030	MEKLETI MADHAVA LAKSH
	213H1R0031	MADDU SUDHARSHINI
	213H1R0032	MALLAPU SRAVANI
	213H1R0033	PALADUGU SATYA PRAVEEN
	213H1R0034	PELLI LAKSHMI SUREKHA
	213H1R0035	PITLA LAHARYA
	213H1R0036	PRATHI SWETHA
	213H1R0037	PUTTA NAGA DIVYA
	213H1R0038	RAMANAM SRI DURGA HA
	213H1R0039	SADI VASANTHA LAKSHMI
	213H1R0040	SAMBANGI SUREKHA
	213H1R0041	SAMA SAI
	213H1R0042	SATHA PAVANI
	213H1R0043	SOKKALI KUMAR NARENDR
	213H1R0044	TANA RANGA PHANI LAKSH
	213H1R0045	VELAGALA URMILA
	213H1R0046	ANGELA PAVANI
	213H1R0047	VETTAKOLA DIVYA POOJITH
	213H1R0048	AVIRISETTI VIJAYA LATHA
	213H1R0049	VELAMATI CHARAN SRI SIVA
	213H1R0050	YALLA POOJA KEERTHI



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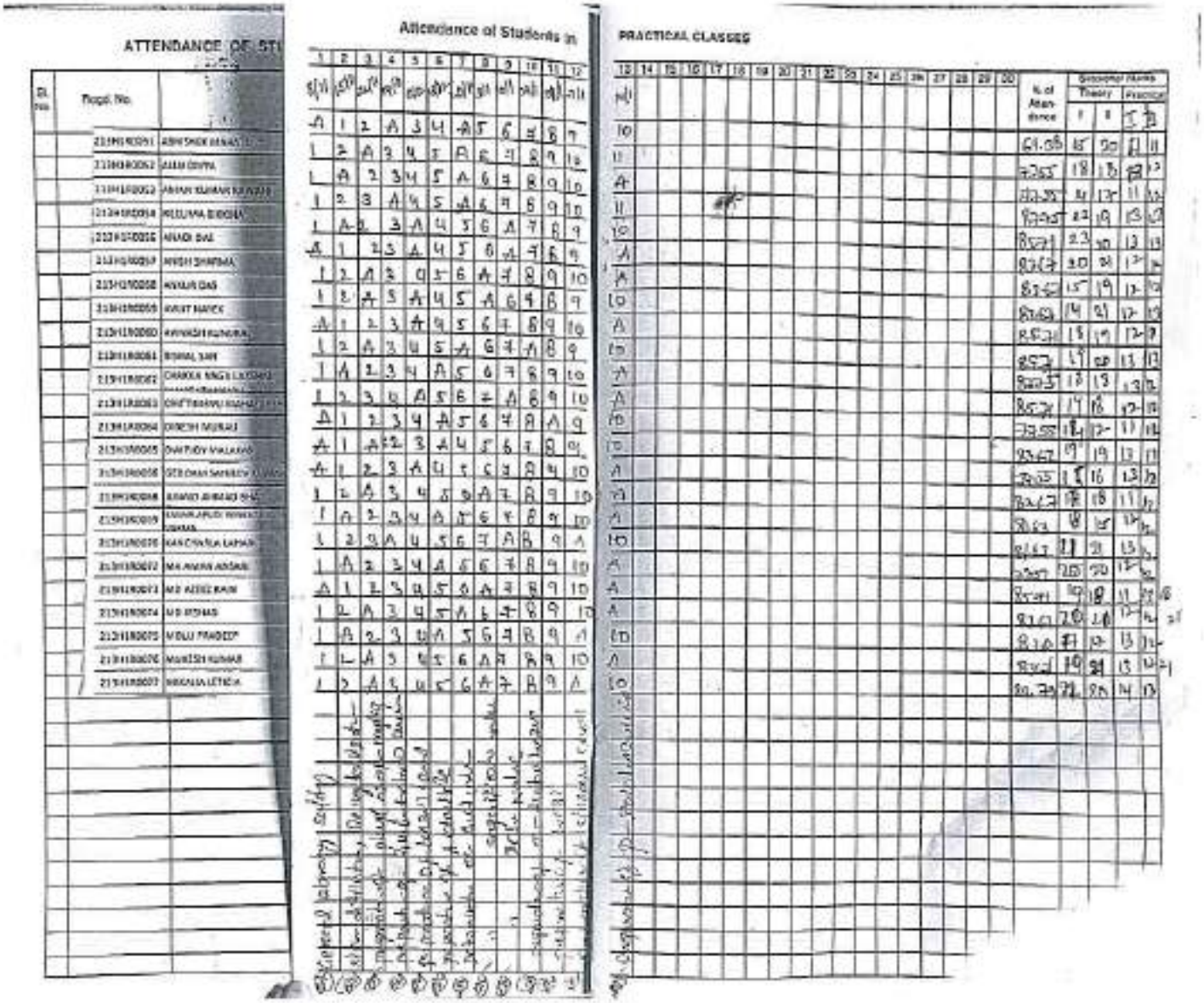

ATTENDANCE OF STU

Attendance of Students in

PRACTICAL CLASSES

Sl. No.	Regd. No.	
	213H5103051	ABHISHEK BANAT[illegible]
	213H5103052	AMAN GUPTA
	213H5103053	ARJUN KUMAR KAVATI
	213H5103054	BELLUNA BIRSHA
	213H5103055	BHABI BAI
	213H5103057	BHISHI SHARMA
	213H5103058	BIKRAM DAS
	213H5103059	BIKRAT MANDI
	213H5103060	BHAVESH KUMORA
	213H5103061	BISHAL SAH
	213H5103062	CHANDA MAGLI LAKSHMI
	213H5103063	CHETTIBHANU KUMUDINI
	213H5103064	DINESH MURMU
	213H5103065	DHATRIDEV MALAKAR
	213H5103066	GEETANJALI SHIRLEY KUMARI
	213H5103068	HAMID AHMAD KHAN
	213H5103069	HANUMARUDU MANASA SARMA
	213H5103070	HANCHINTALA LAKSHMI
	213H5103072	MA ANAM ANSARI
	213H5103073	MD AZEEZ KHAN
	213H5103074	MD IRSHAD
	213H5103075	MOLU PRADEEP
	213H5103076	MUKESH KUMAR
	213H5103077	MOUNIKA LETICIA

No. of Attendance	Grouping Marks			
	Theory		Practical	
	I	II	I	II
61.05	15	20	11	11
72.65	18	15	13	13
83.33	14	13	11	14
93.05	22	19	15	15
85.71	23	20	13	13
83.63	20	21	13	14
82.55	15	19	12	12
84.69	14	21	12	13
85.30	15	19	12	13
85.71	17	20	13	13
80.55	13	13	13	12
86.24	17	16	12	11
78.88	14	12	11	14
95.47	19	19	13	11
90.05	15	16	13	12
84.42	17	18	11	12
78.63	18	15	12	14
91.67	21	21	13	12
93.33	20	20	12	14
85.41	19	18	11	13
91.67	20	20	12	14
83.63	21	19	13	12
89.47	19	21	13	12
80.39	21	20	14	13

ADITYA COLLEGE OF PHARMACY SURAMPALEM

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Aditya College of Pharmacy
SURAMPALEM

ATTENDANCE OF STU

Attendance of Students in PRACTICAL CLASSES

Sl No.	Regd. No.	
	213H1R0005	PASUPULETI VENKATA SATY
	213H1R0029	PUJA MEERAJA
	213H1R0032	PAWGEET MAZ THAKUR
	213H1R0033	PUJJI KAR
	213H1R0041	RITESH KUMAR PATHAK
	213H1R0043	SHAIDAJJA SPARTA SRI
	213H1R0044	SARVANI RAMETHA
	213H1R0045	SHIVOLIYA MUJJUCK
	213H1R0050	SHAIK KAKSHNAA
	213H1R0053	SHAMBHU YADAV
	213H1R0058	SANDANA RAO SRAVYA
	213H1R0061	SNEHA ROY
	213H1R0063	SOHANA MAITY
	213H1R0091	SUBHANKAR ROY
	213H1R0031	SUTRAPELLI THAMLAM SAI
	213H1R0055	SUMRAJA ESTHER HEPHZI
	213H1R0054	SORLAPATI SAVATH SAIE
	213H1R0059	TALLA DATTA SRIDHU
	213H1R0060	ULIR Ravi Ganesharaju
	213H1R0097	VEPRALA SUDITYA DEVI
	213H1R0098	VANGA RAMA KRANTHI
	213H1R0069	YARRALA SURYA LAKSHMI
	213H1R0048	THANDRATHI SARATHA APA
	213H1R0035	KADDY MUGA RAJESH KU
	213H1R0002	ABRAHAM GONGA VIJ

Total Attendance	Percentage	
	Theory	Practical
	I	II
85.71	17	16
85.71	18	19
91.67	15	17
91.67	13	21
91.67	17	20
77.27	15	17
91.67	12	19
91.67	17	18
79.17	12	16
91.67	16	16
79.17	19	16
79.24	24	19
83.33	19	20
79.17	20	17
87.50	21	18
79.55	14	20
79.17	19	18
87.50	16	20
83.33	12	18
91.67	11	18
91.67	17	18
75.00	14	17
79.17	16	17
83.33	16	12
83.33	18	21

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SURAMPALEM-533 437

BP306P. PHYSICAL PHARMACEUTICS – I (Practical)

4 Hrs/week

1. Determination the solubility of drug at room temperature
2. Determination of pKa value by Half Neutralization/ Henderson Hasselbalch equation.
3. Determination of Partition co- efficient of benzoic acid in benzene and water
4. Determination of Partition co- efficient of Iodine in CCl_4 and water
5. Determination of % composition of NaCl in a solution using phenol-water system by CST method
6. Determination of surface tension of given liquids by drop count and drop weight method
7. Determination of HLB number of a surfactant by saponification method
8. Determination of Freundlich and Langmuir constants using activated char coal
9. Determination of critical micellar concentration of surfactants
10. Determination of stability constant and donor acceptor ratio of PABA-Caffeine complex by solubility method
11. Determination of stability constant and donor acceptor ratio of Cupric-Glycine complex by pH titration method

Recommended Books: (Latest Editions)

1. Physical Pharmacy by Alfred Martin
2. Experimental Pharmaceutics by Eugene, Parott.
3. Tutorial Pharmacy by Cooper and Gunn.
4. Stocklosam J. Pharmaceutical Calculations, Lea &Febiger, Philadelphia.
5. Liberman H.A, Lachman C., Pharmaceutical Dosage forms, Tablets, Volume-1 to 3, MarcelDekkar Inc.
6. Liberman H.A, Lachman C, Pharmaceutical Dosage forms. Disperse systems, volume 1, 2, 3. Marcel Dekkar Inc.
7. Physical Pharmaceutics by Ramasamy C and ManavalanR.
8. Laboratory Manual of Physical Pharmaceutics, C.V.S. Subramanyam, J. Thimma settee
9. Physical Pharmaceutics by C.V.S. Subramanyam
10. Test book of Physical Phramacy, by Gaurav Jain & Roop K. Khar

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BP306P III I B PHARM PHYSICAL PHARMACEUTICS - I

PRACTICAL

ATTENDANCE OF STUD

Attendance of Students In

PRACTICAL CLASSES

Sl. No.	Regd No	Name
	213H1R0001	ABHAVARYA DANDUGOVINA
	213H1R0002	AKONDI SAILAHARI
	213H1R0003	BALANAGU DINESH VENKAT
	213H1R0004	BOKKA DEEPTHI
	213H1R0005	KONTHU SUPRIYA
	213H1R0006	BURGULA LAKSHMI PRASAD
	213H1R0007	CHEEPURUPALLI BHUVANES
	213H1R0008	CHEFLER NAGA LAKSHMI
	213H1R0009	CHINTHA LOKESH KUMAR
	213H1R0010	DASI LAKSHMI JAYASRI
	213H1R0011	DEVAVARAPU VIJAYA LAKS
	213H1R0012	GANGIREDDY RAGA SUREKH
	213H1R0013	GEDDAM RAGA MAHITHA
	213H1R0014	GUTTABEEVI AISWARYA
	213H1R0015	JANGAM MOORAVATHAM
	213H1R0016	JAMPATI PRASHANTHI
	213H1R0017	JOGI SAI SIVA
	213H1R0018	KADALI HIMA SRI
	213H1R0019	KARNISETTI RAJESH
	213H1R0020	KARUKU BHARATH
	213H1R0021	KATTA SOWJANYA MADHURI
	213H1R0022	KOLUTURI KAVYA SRI
	213H1R0023	KUDIKHOTLA [illegible]
	213H1R0024	KUVVATLA USHA SRI LAKSH
	213H1R0025	LANKA JAGDU

Sessional Marks			
% of Attendance	Theory I	Theory II	Practical
95.65%	23	25	13
95.65%	25	27	13
93.47%	26	23	13
93.47%	25	26	13
93.47%	22	24	13
93.47%	17	23	12
97.82%	23	26	13
93.47%	21	23	12
97.82%	21	23	12
91.30%	25	27	12
97.82%	24	27	13
95.65%	25	27	13
93.47%	26	27	13
93.47%	24	27	13
97.82%	23	27	13
95.65%	21	24	12
93.47%	23	26	12
95.65%	24	27	14
95.65%	21	26	12
93.47%	28	26	13
95.65%	24	25	13
95.65%	20	25	12
95.65%	24	27	13
95.65%	24	25	13
91.30%	23	24	12

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SURAMPALEM-533 437

ATTENDANCE OF STUDI

Attendance of Students in PRACTICAL CLASSES

S. No.	Regd. No.	
	213H1R0026	MALLA RAVIPRAKASH
	213H1F0027	MEDA KIRAN KUMAR
	213H1R0028	MOGILLAPU SWAPNA
	213H1F0029	MOHAMMAD SHAKIL
	213H1R0030	MOLLETI MOUNIKA LAKSHMI
	213H1R0031	NAGOTU SUDHARSHINI DURG
	213H1R0032	NALLAPU SRAVANI
	213H1F0033	PALAGANI SATYA PRAVEEN
	213H1R0034	PILLI LAKSHMI SUREKHA
	213H1R0035	PITTA SAYAMYA
	213H1R0036	PRATHI JENEETH
	213H1R0037	PUTTA MADA DIVYA
	213H1R0038	RAMANAM SRI DURGA PADA
	213H1R0039	SADI VASANTHA LAKSHMI
	213H1R0040	SAMBANGI SURENDRA
	213H1R0041	SAYA SAI
	213H1R0042	SATHA PAWAN
	213H1R0043	SODAKU KUMAR SURENDRA
	213H1R0044	SUVARNAM ANAND LAKSHMI
	213H1R0045	VEERAVALA URMILA
	213H1R0046	VINEELA PAMMI
	213H1R0047	VITTANALA DIVYA POORNA
	213H1R0048	VURADASU NAVYA LATHA
	213H1R0049	YALAMATI CHARAN SRI SIVAN
	213H1R0050	YALLA POOJA ALEKHYA

% of Attendance	Sessional Marks	
	Theory	Practical
	I / II	Total
93.4%	26 / 28	14
91.3%	26 / 21	12
91.3%	25 / 24	13
95.6%	15 / 23	12
95.6%	26 / 24	13
95.6%	24 / 26	12
91.3%	25 / 26	12
97.8%	24 / 25	12
86.9%	23 / 24	13
100%	25 / 25	12
91.3%	23 / 24	13
93.8%	27 / 25	12
97.8%	26 / 22	14
97.8%	26 / 27	13
97.8%	26 / 25	13
89.1%	24 / 24	13
95.6%	22 / 24	13
95.6%	21 / 26	12
93.4%	24 / 24	13
93.4%	23 / 25	14
95.6%	25 / 24	13
97.8%	25 / 27	13
95.6%	26 / 26	13
93.9%	27 / 27	14
93.4%	26 / 27	13

ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM-533 437

ATTENDANCE OF STUI

Attendance of Students in PRACTICAL CLASSES

Sl. No.	Regd. No.	
	213H1R0051	DAMSHEE MAHATO
	213H1R0052	ALLU DIVYA
	213H1R0053	AMAN KUMAR RAWANI
	213H1R0054	HEDLIYA GIDDINA
	213H1R0056	ANKITA DAS
	213H1R0057	ANISH SHARMA
	213H1R0058	ANKUR DAS
	213H1R0059	ANKIT RAKSH
	213H1R0060	ANIYUSH KUNDERAL
	213H1R0061	ASHAL SAH
	213H1R0062	CHAKKA NAGA LAKSHMI
	213H1R0063	CHITTIMENU SUMMULESH
	213H1R0064	DINESH MURAO
	213H1R0065	DWIPESH MALAKAR
	213H1R0066	GEDDAM SANJEEV KUMAR
	213H1R0068	JUNAID AHMAD BHAT
	213H1R0069	KINGARAPUVAR VENKATA SAI S
	213H1R0070	KANCHARLA LAHARI
	213H1R0071	KOLANVAN AHSAN
	213H1R0073	MD AZEEZ RAHI
	213H1R0074	MD IRSHAD
	213H1R0075	MOLLI PRADEEP
	213H1R0076	MUKESH KUMAR
	213H1R0077	NEKKAN LETICIA

No. of Attendance	Sessional Marks Theory I	Theory II	Practical I	Practical II
86.6	16	20	13	14
93.3	22	21	14	15
86.6	18	23	12	18
93.3	23	24	14	14
93.3	21	24	13	14
93.3	21	24	13	15
93.3	19	24	13	13
93.3	19	24	12	14
86.6	19	24	11	14
86.6	21	24	11	13
93.3	15	19	14	14
93.3	16	24	14	12
93.3	17	23	15	14
93.3	22	24	14	14
93.3	17	23	14	14
93.3	20	24	12	14
93.3	20	20	13	15
93.3	15	23	14	14
93.3	19	21	13	14
86.6	18	22	13	13
93.3	19	22	13	14
93.3	20	22	13	14
86.6	22	23	13	14
93.3	21	21	14	14

ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM-533 437

ATTENDANCE OF STUD

Attendance of Students In

PRACTICAL CLASSES

Sl. No.	Regd. No.	
	213H1R0076	PAGUPULETI VENKATA SATYA
	213H1R0079	PILLI HEMRAJA
	213H1R0080	RANBEER RAAZ THAKUR
	213H1R0081	RIDU RAJ
	213H1R0082	RITESH KUMAR PATHAK
	213H1R0083	SAKIDALLA SRAVYA SRI
	213H1R0084	SANDHINI MAHTYA
	213H1R0085	SANKALPA MALLICK
	213H1R0086	SHAIK KARISHMA
	213H1R0087	SHAMBHU YADAV
	213H1R0088	SINDANA RAVI SRAVYA
	213H1R0089	SNEHA ROY
	213H1R0090	SOHAM MAITY
	213H1R0091	SUBHANKAR ROY
	213H1R0092	SUTHAPALLI THARUNA SREE
	213H1R0093	DURBALA CSTVEER VENKATA
	213H1R0094	TORLAPATI VIJAYA MANI
	213H1R0095	VALLA DIVYA SINDHU
	213H1R0096	DURBAKA GANGABABU
	213K1R0097	DIPPALA GAYATRI DEVI
	213H1R0098	VANGA RAMA PRARTHI
	213H1R0099	KAPPALA SURYA LAKSHMI SWA
	213H1R0040	THANNIRU SAIBHAVANI ANUSH
	223H1R0001	REDDY NAGA RAJESWARI R
	223H1R0002	SARVAKARAM BAMBA LEELA

Sl. No.	% of Attendance	Sessional Marks			
		Theory		Practical	
		I	II	I	II
	86.6	19	19	12	14
	93.3	23	24	15	13
	93.3	17	20	11	15
	93.3	20	23	13	14
	93.3	18	20	13	14
	93.3	10	23	11	14
	93.3	20	22	13	14
	93.3	21	23	14	13
	93.3	21	25	15	14
	93.3	16	14	11	13
	86.6	18	22	13	14
	86.6	22	23	11	14
	86.6	21	22	11	14
	93.3	19	23	13	14
	86.6	16	22	13	14
	93.3	18	20	13	14
	93.3	22	23	13	14
	93.3	22	25	14	14
	966	18	22	13	14
	93.3	19	23	13	13
	93.3	18	22	13	14
	86.6	21	22	13	14
	86.6	19	20	13	14
	93.3	20	21	13	14
	93.3	21	22	14	14

ADITYA COLLEGE OF PHARMACY SURAMPALEM

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BP308P - PHARMACEUTICAL ENGINEERING (Practical)

4 Hours/week

I. Determination of radiation constant of brass, iron, unpainted and painted glass.
II. Steam distillation – To calculate the efficiency of steam distillation.
III. To determine the overall heat transfer coefficient by heat exchanger.
IV. Construction of drying curves (for calcium carbonate and starch).
V. Determination of moisture content and loss on drying.
VI. Determination of humidity of air – i) From wet and dry bulb temperatures –use of Dew point method.
VII. Description of Construction working and application of Pharmaceutical Machinery such as rotary tablet machine, fluidized bed coater, fluid energy mill, de humidifier.
VIII. Size analysis by sieving – To evaluate size distribution of tablet granulations – Construction of various size frequency curves including arithmetic andlogarithmic probability plots.
IX. Size reduction: To verify the laws of size reduction using ball mill and determining Kicks, Rittinger's, Bond's coefficients, power requirement and critical speed of Ball Mill.
X. Demonstration of colloid mill, planetary mixer, fluidized bed dryer, freeze dryer and such othermajor equipment.
XI. Factors affecting Rate of Filtration and Evaporation (Surface area, Concentration and Thickness/ viscosity
XII. To study the effect of time on the Rate of Crystallization.
XIII. To calculate the uniformity Index for given sample by using Double Cone Blender.

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II I PHARMACEUTICAL ENGINEERING

PRACTICAL

ATTENDANCE OF STU

Page No.

213H1R0001	AGHAVARAPU BABDU SOWRA
213H1R0002	AKOJWI SAI LAHARI
213H1R0003	ALLANADU DINESH VENKAT
213H1R0004	DOKKA DEEPTHI
213H1R0005	DONTHU SUNYNA
213H1R0006	BURGULA LAKSHMI PRASAN
213H1R0007	CHERUKUPALLI BHUVANES
213H1R0008	CHEPURI NAGA LAKSHMI
213H1R0009	CHINTHA LOKESH KUMAR
213H1R0010	DANI LAKSHMI JOSHNI
213H1R0011	DEVARAKAPU VEERA LAKSH
213H1R0012	GANDHIRAO DR RAGHAVENDR
213H1R0013	GEDDAM NAGA MAHITHA
213H1R0014	GUTTIMEEDI AISWARYA
213H1R0015	JANGAM KOKKARATNAM
213H1R0016	JARPATI PRASHANTHI
213H1R0017	KODI SAI SIVA
213H1R0018	KADALI HIMA SRI
213H1R0019	KARANGETTI RAKESH
213H1R0020	KARINGI BHARATHI
213H1R0021	KATTA SOUMYA MADHURI
213H1R0022	KOLLUTURI KAVYA SRI
213H1R0023	KUCHIPUDI LA GAYATHRI SAI PRIYANKA
213H1R0024	KUMPATLA USHA SRI LAKSH
213H1R0025	LANKA SIDDU

Attendance of Students in

PRACTICAL CLASSES

% of Attendance	Sessional Marks Theory I	Theory II	Practical
95.67	23	28	13
95.67	24	27	13
93.47	26	27	13
93.47	25	26	13
93.47	22	24	13
93.47	17	23	12
97.67	23	28	13
93.47	21	23	12
99.67	21	28	12
91.38	25	27	12
97.67	24	27	13
95.67	26	27	13
93.47	26	27	13
93.47	24	27	13
97.67	23	27	13
95.67	21	26	12
93.47	23	26	12
95.67	24	27	13
95.67	21	26	12
93.47	22	26	13
95.67	23	25	13
95.67	20	25	12
95.67	24	27	13
95.01	24	26	13
91.37	25	24	12

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Aditya College of Pharmac.
SURAMPALEM- 533 437

ATTENDANCE OF STUDI

Attendance of Students in PRACTICAL CLASSES

Sl No	Regd. No.	
	213H1F0026	MALLA RAVEENDRAMALA
	213H1A0027	VEDA KIRAN KUMAR
	213H1F0028	MOGAMAPU SWAPNA
	213H1F0029	MOHAMMAD SHAKIR
	213H1A0030	MOLLETI MOUNIKA LAKSHMI
	213H1F0031	NAGOTU SUDHARSHAN SURG
	213H1A0032	NALLAPU SRAVANI
	213H1B0033	PALAGANI SATYA PRAVEEN
	213H1A0034	PILLI LAKSHMI JAHNAVA
	213H1A0035	PITLA LAHARYA
	213H1A0036	PRATHI JEMEEMA
	213H1A0037	PUTTA HASA DIVYA
	213H1B0038	RAMAVARAM SRI DURGA NAGA
	213H1A0039	SADE VASANTHA LAKSHMI
	213H1F0040	SAMBANGI SURENDRA
	213H1F0041	SAIVA SAI
	213H1F0042	SATHA PAVANI
	213H1F0043	SOORAU KUMARI SURENDRA
	213H1A0044	SUVARNAM JHANSI LAKSHMI
	213H1A0045	VELAGADA URMILA
	213H1B0046	VINEELA PAMMI
	213H1F0047	VITTANALA DIVYA POOJITHA
	213H1F0048	VUPPADDU SURYA LATHA
	213H1A0049	YALAMATI CHARVI SRI SAVAN
	213H1A0050	YELLA POOJA ALEKHYA

% of attendance	Sessional Marks Theory I	Theory II	Practical
93.97	26	23	14
91.37	30	21	12
91.37	25	24	13
95.61	15	27	12
95.61	24	24	13
95.61	24	26	12
91.37	25	24	12
97.81	24	25	12
86.97	23	24	13
100	25	25	12
91.37	27	24	13
93.81	27	25	12
97.81	26	24	14
97.81	24	27	13
97.81	26	25	13
89.05	24	24	13
95.61	22	24	13
95.61	21	26	12
93.81	24	24	13
93.97	23	25	14
95.61	25	24	13
97.81	25	27	13
95.61	24	24	13
93.97	27	27	14
93.97	24	27	13

ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM- 533 437

ATTENDANCE OF STUDENTS

Attendance of Students PRACTICAL CLASSES

Sl. No.	Regd. No.	
	213H1R0051	ABHISHEK MAHATO
	213H1R0053	ALLU DIVYA
	213H1R0054	AMAN KUMAR RAWANI
	213H1R0056	AZEEMA BIRMAN
	213H1R0057	BHADI DAS
	213H1R0059	BHISH SHARMA
	213H1R0060	BIMBUR DAS
	213H1R0061	BISMIL SAH
	213H1R0062	CHANDA NAGA LAKSHMI
	213H1R0063	CHITTIMOTHU SHANKARLAKSHM
	213H1R0064	DINESH MURMU
	213H1R0065	DWIPJOY SHALAKAR
	213H1R0066	GEDDAM SANJEEV KUMAR
	213H1R0068	JUNAID AHMAD BHAT
	213H1R0069	KAMARAPUDI VENKATA SAI V
	213H1R0070	KANCHARLA LAHARI
	213H1R0072	MAJAHAN ANSARI
	213H1R0073	MD AZEEZ BIN
	213H1R0074	MD IRSHAD
	213H1R0075	MOLLI PRADEEP
	213H1R0076	MUKESH KUMAR
	213H1R0077	NIRMALA LETICIA

Sl. No.	Regd. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	% of Attendance	Sessional Marks Theory I	Theory II	Practical I	Practical II
	213H1R0051	A	1	2	3	4	5	6	7	A	9	10		12	13																	86.6	16	24	13	14
	213H1R0053	1	2	3	4	A	5	6	7	8	9	10		12	13																	93.3	23	21	14	13
	213H1R0054	1	2	3	4	5	6	7	8	9	10	A	12		13																	86.6	18	22	12	12
	213H1R0056	1	2	3	4	5	6	7	8	9	10	A		12	14																	95.3	22	24	14	14
	213H1R0057	1	A	2	3	4	5	6	7	8	9	10		12	14																	93.3	21	24	13	14
	213H1R0059	1	2	3	4	5	6	7	8	9	10	11		13	14																	93.3	22	24	13	12
	213H1R0060	A	1	2	3	4	5	6	7	8	9	10		A	14																	93.3	19	24	13	13
	213H1R0061	A	1	2	3	4	5	6	7	8	9	10		12	14																	93.3	19	24	12	14
	213H1R0062	1	2	3	4	5	6	A	7	8	9	10		12	13																	86.6	19	24	11	14
	213H1R0063	1	2	A	3	A	4	5	6	7	8	9		12	13																	86.6	21	24	11	13
	213H1R0064	1	2	3	4	5	6	7	8	9	10	A		13	14																	93.3	15	20	14	14
	213H1R0065	1	2	3	4	5	6	A	7	8	9	10		13	14																	93.3	14	24	14	13
	213H1R0066	1	2	3	4	5	6	7	8	9	10	11		13	14																	93.3	19	23	13	14
	213H1R0068	1	A	2	3	4	5	6	7	8	9	10		12	14																	93.3	22	24	13	14
	213H1R0069	1	2	3	4	5	A	6	7	8	9	10		13	14																	93.3	19	25	14	14
	213H1R0070	1	2	3	4	5	6	7	8	A	9	10		13	14																	93.3	20	23	12	14
	213H1R0072	1	2	3	A	4	5	6	7	8	9	10		14	14																	93.3	20	20	13	13
	213H1R0073	1	2	3	4	5	6	7	A	8	9	10		13	14																	93.3	23	23	14	14
	213H1R0074	A	1	2	3	4	5	6	7	8	9	10		13	14																	93.3	19	21	13	14
	213H1R0075	A	1	2	3	4	5	6	7	8	9	10		13	A																	86.6	18	22	13	13
	213H1R0076	1	2	3	4	5	6	7	8	9	10	11		14	A																	93.3	19	22	13	14
	213H1R0077	1	2	3	4	5	6	7	8	9	10	11		13	14																	93.3	20	22	13	14
		1	2	3	A	4	5	6	7	8	9	10		13	14																	86.6	22	23	13	14
		1	2	3	A	4	5	6	7	8	9	10		13	14																	93.3	21	21	14	14

Reaction involving Grignard reagent

Reaction of Acetyl chloride with organometallic reagent

Stork enamine reaction

Clemmensen reduction

Wolff-Kishner reduction

Oppenauer oxidation

Reformatsky reaction

Wittig reaction

Perkin reaction

Benzoin condensation

Friedel-Crafts acylation

Cannizzaro reaction

Claisen condensation

Synthesis of Grignard reagent

Diels-Alder reaction

Aldol condensation

Hofmann bromamide reaction

Preparation of Grignard reagent

Preparation of Acetyl chloride

ADITYA COLLEGE OF PHARMACY SURAMPALEM

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Aditya College of Pharmacy
SURAMPALEM- 533 437

ATTENDANCE OF STUDENTS

Attendance of Students in PRACTICAL CLASSES

Sl. No.	Regd. No.	
	213H1R0078	PANUPANETI VENKATA SATY
	213H1R0074	PILLI NEERAJA
	213H1R0090	RANJEET RAJA TH KOUR
	215H1R0081	REKI KAR
	213H1R0002	RITESH KUMAR PATHAK
	213H1R0085	SANDILLA SRAVYA SRI
	213H1R0084	SANPINI RAHITYA
	213H1R0096	SANKALP A MALLICK
	213H1R0086	SHAIK HAN SHAIA
	213M1R0057	SHAIVENU YADAV
	213H1R0088	SINGANA RAO SRAVAN
	213H1R0089	SINDHA ROY
	213H1R0090	SOHAM MAITY
	213H1R0091	SUNKARAGOM ROY
	213H1R0092	SUTHRAPELLI THARUNI SREE
	223H1R0002	GURRALA ESTHER HEPHZIBA
	223H1R0004	TORLAPATI SWATHI SREE
	213H1R0005	VALLA BHAVA SHORU
	213H1R0096	VEMPAVI RAMARAJU
	213H1R0097	YERRAJA GAYATRI DEVI
	213H1R0098	VANGA RAMA KRANTHI
	213H1R0095	KAPPALA SURYA LAKSHMI DAV
	213H1R0040	THANDRETU SUMITHA ANJAN DEVI
	223H1R0001	REDDY MADA RAJESWARI R
	223H1R0002	SANKARAM GRUHA LEELA

% of Attendance	Sessional Marks			
	Theory		Practical	
	I	II	I	II
86.6	18	19	19	19
93.3	28	22	19	19
93.3	28	20	16	18
93.3	20	22	18	18
93.3	19	20	18	19
93.3	20	23	11	19
93.3	20	22	18	19
93.3	21	29	19	20
93.3	21	28	18	19
83.3	16	19	18	18
86.6	18	21	18	18
80.6	22	23	11	19
86.6	21	29	11	19
93.3	19	28	12	19
86.6	18	22	18	19
93.3	18	20	18	19
93.3	22	29	18	19
93.3	29	25	19	19
96.6	18	22	12	19
93.3	19	23	18	18
93.3	18	21	18	19
86.6	21	21	18	19
86.6	19	20	18	19
93.3	20	21	19	19
93.3	21	22	19	19

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BP406P. MEDICINAL CHEMISTRY – I (Practical)

4 Hours/Week

I	**Preparation of drugs/ intermediates**
1	1,3-pyrazole
2	1,3-oxazole
3	Benzimidazole
4	Benztriazole
5	2,3- diphenyl quinoxaline
6	Benzocaine
7	Phenytoin
8	Phenothiazine
9	Barbiturate
II	**Assay of drugs**
1	Chlorpromazine
2	Phenobarbitone
3	Atropine
4	Ibuprofen
5	Aspirin
6	Furosemide
III	**Determination of Partition coefficient for any two drugs**

Recommended Books (Latest Editions)

1. Wilson and Giswold's Organic medicinal and Pharmaceutical Chemistry.
2. Foye's Principles of Medicinal Chemistry.
3. Burger's Medicinal Chemistry, Vol I to IV.
4. Introduction to principles of drug design- Smith and Williams.
5. Remington's Pharmaceutical Sciences.
6. Martindale's extra pharmacopoeia.

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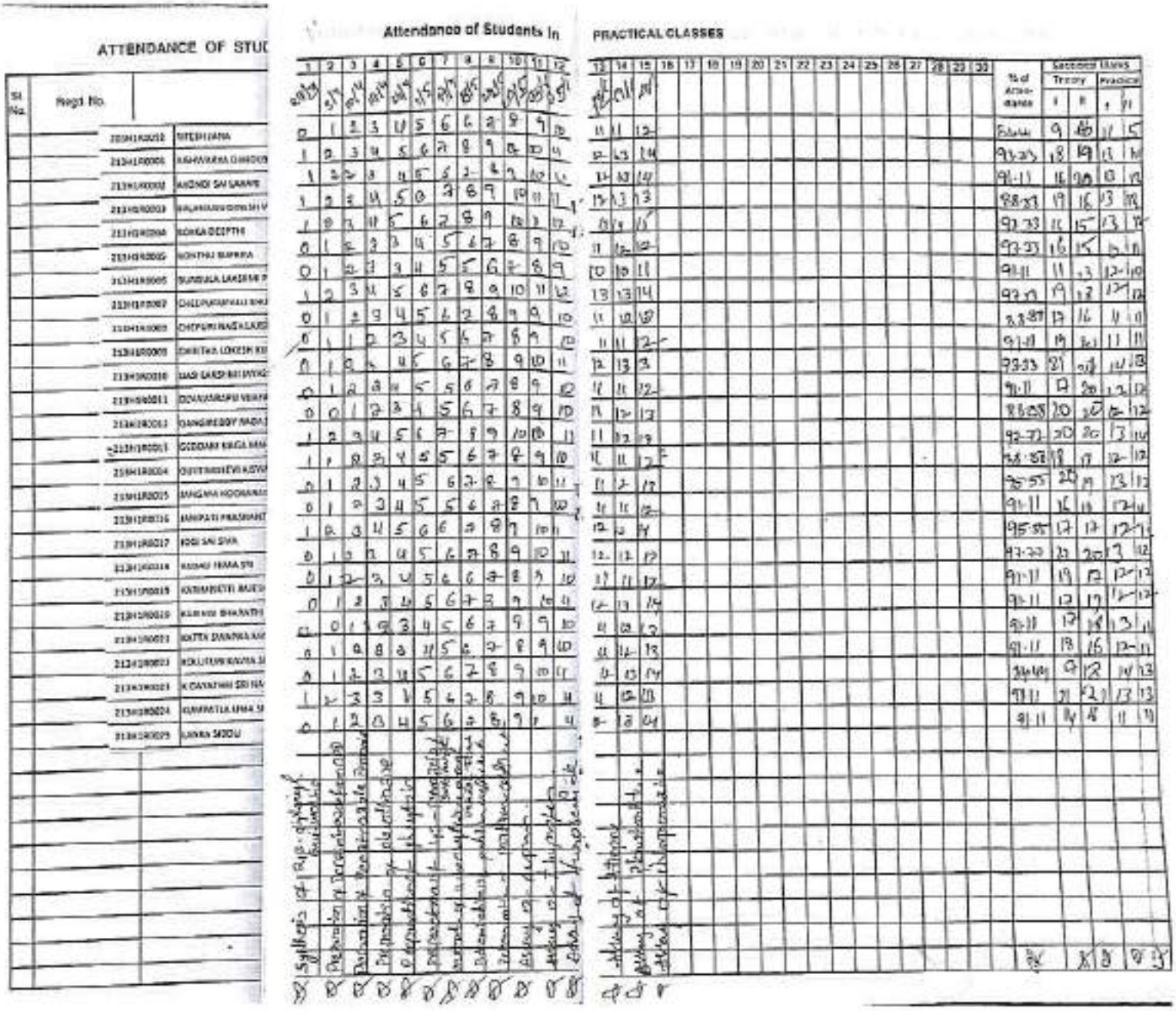
7. Organic Chemistry by I.L. Finar, Vol. II.
8. The Organic Chemistry of Drug Synthesis by Lednicer, Vol. 1-5.
9. Indian Pharmacopoeia.
10. Text book of practical organic chemistry- A.I.Vogel.

BP406P II II B.PHARM MEDICINAL CHEMISTRY - I

PRACTICAL



ATTENDANCE OF STUD

Attendance of Students in PRACTICAL CLASSES

Sl. No	Regd. No.	
	213I1R0024	MALLA RAVITEJAMALA
	213I1R0027	MEDA RIKHIL KUMAR
	213I1R0038	MOGALLAPU Sriram
	213I1R0039	MOHAMMAD SHAKIR
	213I1R0040	MOLETI VISHNUVA LA
	213I1R0043	NAGOTU SUBHASH R
	213I1R0044	NAKKAPU SRAVANI
	213I1R0045	PALAGANI SATYA RAM
	213I1R0046	PILLI LAVISHNU SURYA
	213I1R0035	PITLA LAVANYA
	213I1R0036	PRATHI JEHOVAH
	213I1A0037	PUTTA NAGA Divya
	213I1A0038	RAMAVATH SRI DURGA
	213I1R0039	SADI VASANTHA LAXMI
	213I1R0040	SAMBANGI SURENDRA
	213I1R0041	SANA SAI
	213I1R0042	SATHA PAVANI
	213I1R0043	SOORAJ KUMAR SUREN
	213I1R0044	SURAMPUDI JANAKI LAK
	213I1R0045	VELAGALA URMILA
	213I1R0046	VINUTHA PAVANI
	213I1R0047	VITTAPALA DIVYA POOJ
	213I1R0048	YUVADASU HARSHA LAT
	213I1R0049	YALAMATI CHARAN SAI
	213I1R0050	NALLA POOJA ALEKHYA

% of Attendance	Sessional Marks	
	Theory	Practical
	I II	
91.11	20 21	2 13
95.83	15 15	11 13
91.11	20 21	12 14
88.88	14 14	11 12
91.11	19 18	12 13
88.88	17 16	11 13
88.88	20 20	12 13
86.6	18 20	12 13
95.55	16 20	11 13
93.33	20 15	11 13
91.11	18 21	12 13
93.33	23 22	14 13
95.55	16 18	13 13
91.11	19 20	13 13
88.88	18 18	13 13
95.55	17 19	11 13
93.33	18 16	16 17
91.11	16 18	12 13
91.11	21 16	11 13
91.11	21 21	14 14
88.88	14 19	12 13
91.11	16 21	12 13
93.33	19 21	12 14
93.33	18 20	12 13
95.55	22 22	14 14

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BP 408 P.PHARMACOLOGY-I (Practical)

4Hrs/Week

1. Introduction to experimental pharmacology.
2. Commonly used instruments in experimental pharmacology.
3. Study of common laboratory animals.
4. Maintenance of laboratory animals as per CPCSEA guidelines.
5. Common laboratory techniques. Blood withdrawal, serum and plasma separation, anesthetics and euthanasia used for animal studies.
6. Study of different routes of drugs administration in mice/rats.
7. Study of effect of hepatic microsomal enzyme inducers on the phenobarbitone sleeping time in mice.
8. Effect of drugs on ciliary motility of frog oesophagus
9. Effect of drugs on rabbit eye.
10. Effects of skeletal muscle relaxants using rota-rod apparatus.
11. Effect of drugs on locomotor activity using actophotometer.
12. Anticonvulsant effect of drugs by MES and PTZ method.
13. Study of stereotype and anti-catatonic activity of drugs on rats/mice.
14. Study of anxiolytic activity of drugs using rats/mice.
15. Study of local anesthetics by different methods

Note: All laboratory techniques and animal experiments are demonstrated by simulated experiments by softwares and videos

Recommended Books (Latest Editions)

1. Rang H. P., Dale M. M., Ritter J. M., Flower R. J., Rang and Dale's Pharmacology,.Churchil Livingstone Elsevier
2. Katzung B. G., Masters S. B., Trevor A. J., Basic and clinical pharmacology, Tata Mc Graw-Hill
3. Goodman and Gilman's, The Pharmacological Basis of Therapeutics
4. Marry Anne K. K., Lloyd Yee Y., Brian K. A., Robbin L.C., Joseph G. B., Wayne A. K., Bradley R.W., Applied Therapeutics, The Clinical use of Drugs, The Point Lippincott Williams & Wilkins
5. Mycek M.J, Gelnet S.B and Perper M.M. Lippincott's Illustrated Reviews-Pharmacology

BP408 P PHARMACOLOGY – I PRACTICAL

ATTENDANCE OF STUD

Attendance of Students in

PRACTICAL CLASSES

Sl. No.	Regd. No.	
	22041E00002	ADLEM JAGA
	22041E00003	ADHYAMAN DUNDU
	22041E00004	ALBADE SAI LAHARI
	22041E00005	BALARAJU DINESH
	22041E00006	BOKKA DEEPTHI
	22041E00007	BONTHU SUPRIYA
	22041E00008	BURRKA LAKSHMI
	22041E00009	CHEEPURUPALLI BH
	22041E00010	CHILUKA NAGA LAK
	22041E00011	CHUNDRU HARISH KU
	22041E00012	DASI LAKSHMI MANI
	22041E00013	DEVAVARAPU VIJAYA
	22041E00014	GANGINEDDY RAGH
	22041E00015	GODUMA VARA MU
	22041E00016	GUTTIKONDA ANNA
	22041E00017	JANGAM HEMCHAND
	22041E00018	KAVURI PRASHANT
	22041E00019	KOLA SAI SIVA
	22041E00020	KURAPATI HEMA SR
	22041E00021	LAKKIMSETTI RAJESH
	22041E00022	LANKIDI BHARATHI
	22041E00023	MATTA SWAPNA MA
	22041E00024	MOLUGURI KAVYA SR
	22041E00025	NAMBATHU SRI NAG
	22041E00026	NUKAPOTU UMA SR
	22041E00027	UMA KUDDU

% of Attendance	Sessional Marks			
	Theory		Practical	
	I	II	I	II
96.66	12	A	14.5	A
100/.	24	28	14	14
100/.	23	28	14	14
93.3/.	23	28	13.5	14
100/.	23	28	14	14
100/.	24	21	14	13
100/.	21	21	13.5	13
100/.	23	20	14	13
93.3/.	23	21	13.5	13
100/.	23	24	13.5	13
100/.	24	24	13.5	14
93.3/.	24	23	13	13
100/.	28	21	13.5	13
93.3/.	23	24	13.5	15
100/.	23	23	14	13
100/.	24	23	14	14
100/.	23	21	13.5	13
100/.	24	19	13.5	13
100/.	25	25	13.5	15
100/.	24	23	13.5	13
100/.	23	21	13.5	14
93.3/.	23	21	13.5	13
93.3/.	24	23	14	13
100/.	24	22	14	13
100/.	24	23	13.5	13
93.3/.	23	19	13.5	13

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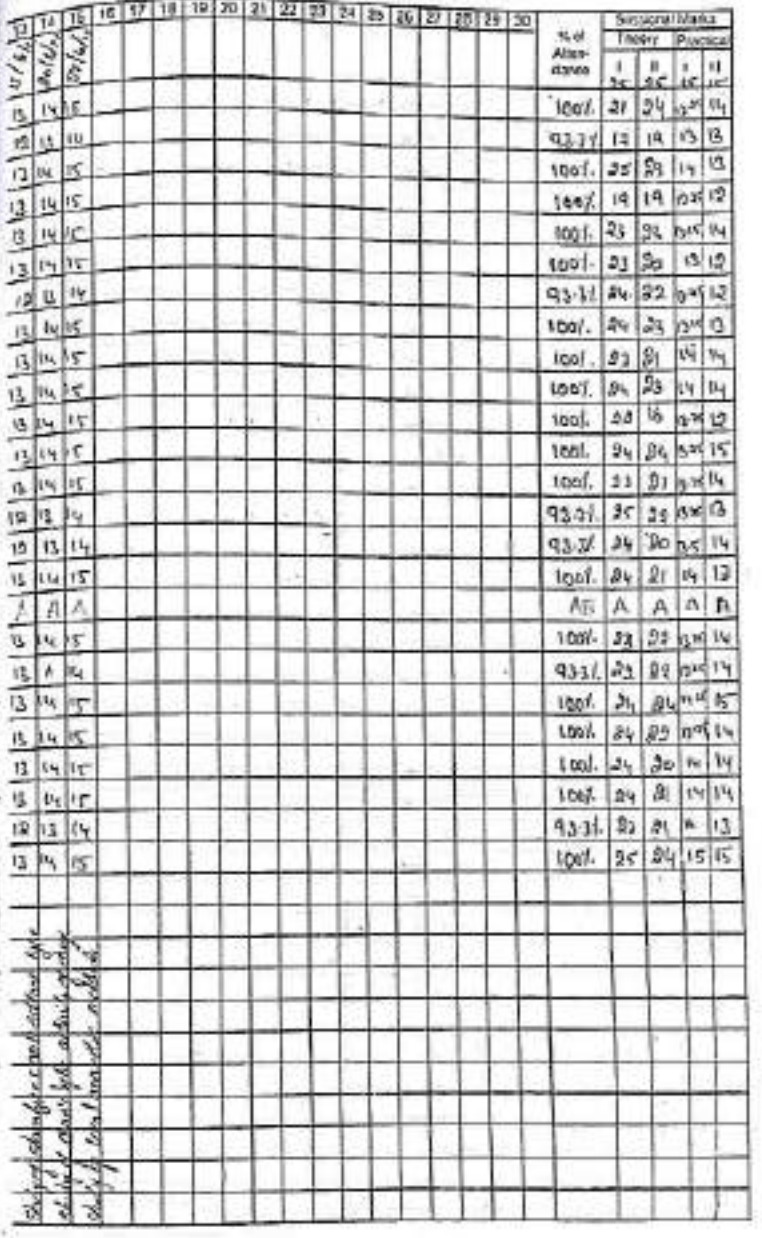
ATTENDANCE OF STUD

Attendance of Students in PRACTICAL CLASSES



ATTENDANCE OF STUDENTS

Attendance of Students in

PRACTICAL CLASSES

Sl. No.	Regd. No.		% of Attendance	Sessional Marks Theory I	Theory II	Practical I	Practical II
	213H1R0031	MOUSHUMI MAHATO	80	19	18	12	11
	213H1R0053	PUJA DIVYA	80	18	16	13	14
	213H1R0063	SANJAY KUMAR BARIK	80	19	18	12	12
	213H1R0064	SEELAMA BHANU	93	24	22	14	14
	213H1R0076	SHAZI DAS	93	23	22	13	15
	213H1R0081	SHIVA SHARMA	86	23	22	14	13
	213H1R0086	SHUKLA DAS	80	22	19	12	11
	213H1R0088	SUJIT MANDI	86	18	21	13	15
	213H1R0090	SUMANTH KUDUMUL	86	23	20	13	12
	213H1R0091	SUSHIL SAH	93	23	23	13	13
	213H1R0092	SWARNA HARI LAKE	93	22	20	13	13
	213H1R0095	SWETA DEVI MAHAT	86	22	20	12	12
	213H1R0096	SYED SHAHID	80	22	19	13	13
	213H1R0097	SYED SHOAIB	93	23	22	13	13
	213H1R0098	TEEGALA SANJEEV	86	22	19	13	13
	213H1R0099	THANEERU MOHAMMAD	86	18	20	13	12
	213H1R0100	THOTAKURA VENKATA	86	19	18	13	12
	213H1R0101	VANCHAKULA LAHARI	86	22	23	14	14
	213H1R0102	VASIMALLA DIVYA	93	22	20	13	13
	213H1R0103	VEDAVATHU ABDUL	86	21	20	13	13
	213H1R0104	VUDIREDDI	86	23	19	13	13
	213H1R0105	YADLA PRADEEP	80	18	19	12	12
	213H1R0106	YAKKALA RAKESH	86	22	22	14	13
	213H1R0107	YANADA LEELA	93	23	24	14	13
	213H1R0108	YASUPULETI VENKATA	86	18	19	13	13

ADITYA COLLEGE OF PHARMACY SURAMPALEM

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Aditya College of Pharmacy
SURAMPALEM- 533 437

ATTENDANCE OF STUD

Attendance of Students in PRACTICAL CLASSES

Regd. No.	
213410D0379	PRAVEEN RAM
213410D0382	RANJEET RAMETHAKUR
213410D0383	RAVI KIR
213410D0384	RITESH KUMAR PATHAK
213410D0385	SAMBALLA SRAVYA SRI
213410D0386	SANJANA BAIRTYA
213410D0387	SANANJTA MALLICK
213410D0388	SHIVA KRISHNA
213410D0389	SHUBHAM YADAV
213410D0390	SRINIVAS MADHUKUNDA
213410D0391	SNEHA ROY
213410D0392	SONIAN KAUTY
213410D0393	SUDHAKAR ROY
213410D0394	VATHAPALLI SHAMILIAH
213410D0395	GURRALA ESTHER HEPH
213410D0396	KORLAPATI VAATHI SRI
213410D0397	NALLA DIVYA SHORU
213410D0398	GUPANAM GAYATHRIBU
213410D0399	SIRIKILA GANYA DEVI
213410D0400	VAADA RAMAKRISHNA
213410D0401	GURRALA SURYA LAKSH
213410D0402	T SUSHITHA APARNA V
223H5R0D001	REDDY RAGA RADESH
223H5R0D002	SANKARAM GANGA LI

% of Attendance	Session Hours Theory I	Theory II	Practical I	Practical II
86	22	21	14	13
80	20	13	13	12
86	22	15	13	13
86	19	18	13	12
86	21	18	13	13
86	22	22	13	13
80	20	18	13	12
86	23	20	14	14
80	20	20	13	12
86	19	18	13	12
93	24	22	14	14
80	23	21	13	13
86	22	19	13	13
86	21	18	13	13
86	22	22	13	13
93	23	23	14	14
86	23	18	14	13
80	22	18	12	13
80	22	21	13	13
80	20	19	12	12
86	21	19	13	13
80	20	20	13	13
86	22	19	13	13
93	22	21	13	14

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BP 506 P. Industrial Pharmacyl (Practical)

4 Hours/week

1. Preformulation studies on paracetamol/asparin/or any other drug
2. Preparation and evaluation of Paracetamol tablets
3. Preparation and evaluation of Aspirin tablets
4. Coating of tablets- film coating of tables/granules
5. Preparation and evaluation of Tetracycline capsules
6. Preparation of Calcium Gluconate injection
7. Preparation of Ascorbic Acid injection
8. Qulaity control test of (as per IP) marketed tablets and capsules
9. Preparation of Eye drops/ and Eye ointments
10. Preparation of Creams (cold / vanishing cream)
11. Evaluation of Glass containers (as per IP)

Recommended Books: (Latest Editions)

1. Pharmaceutical dosage forms - Tablets, volume 1 -3 by H.A. Liberman, Leon Lachman &J.B.Schwartz
2. Pharmaceutical dosage form - Parenteral medication vol- 1&2 by Liberman & Lachman
3. Pharmaceutical dosage form disperse system VOL-1 by Liberman & Lachman
4. Modern Pharmaceutics by Gilbert S. Banker & C.T. Rhodes, 3rd Edition
5. Remington: The Science and Practice of Pharmacy, 20th edition Pharmaceutical Science (RPS)
6. Theory and Practice of Industrial Pharmacy by Liberman & Lachman
7. Pharmaceutics- The science of dosage form design by M.E.Aulton, Churchill livingstone, Latest edition
8. Introduction to Pharmaceutical Dosage Forms by H. C.Ansel, Lea &Febiger, Philadelphia, 5th edition, 2005
9. Drug stability - Principles and practice by Cartensen & C.J. Rhodes, 3rd Edition, Marcel Dekker Series, Vol 107.

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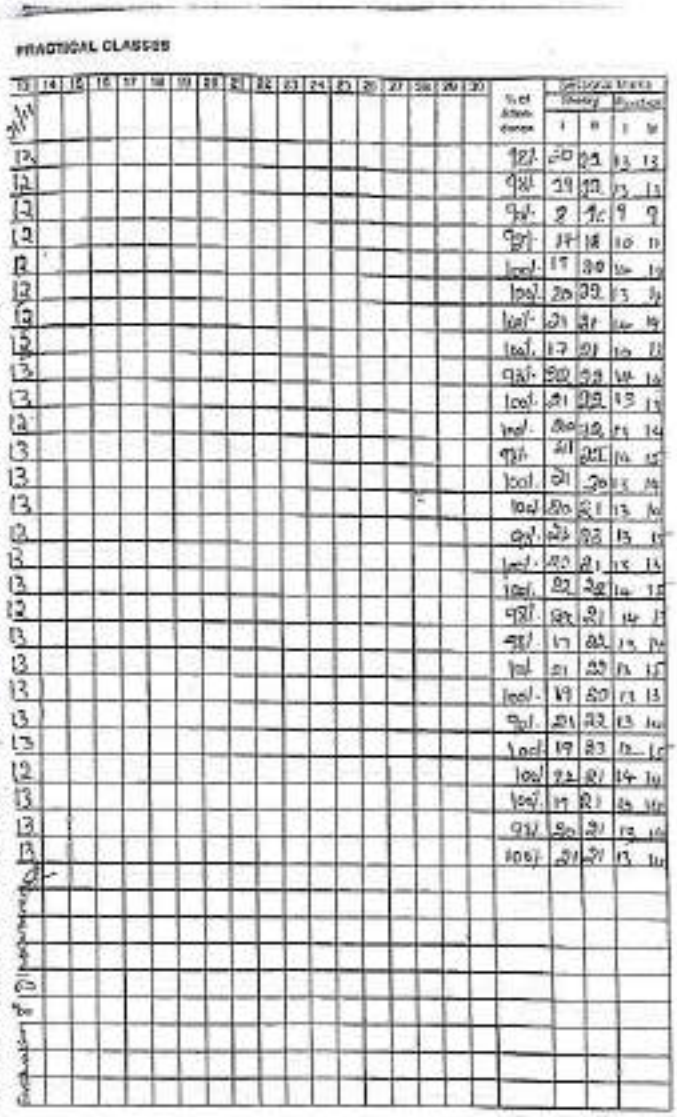
BP506P III / I B. PHARM INDUSTRIAL PHARMACY

PRACTICAL



ATTENDANCE OF STUD

Attendance of Students in PRACTICAL CLASSES

Sl. No.	Regd. No.	
	203H1D0008	
	203H1R0004	
	203H1D0010	
	203H1D0011	
	203H1D0012	
	203H1P0013	
	203H1P0014	
	203H1P0015	
	203H1D0016	
	203H1R0017	
	203H1R0018	
	203H1R0019	
	203H1R0020	
	203H1R0021	
	203H1R0022	
	203H1R0023	
	203H1R0024	
	203H1R0025	
	203H1R0026	
	203H1R0027	
	203H1R0028	
	203H1R0029	
	203H1R0030	
	203H1R0031	
	203H1R0032	
	203H1R0033	
	203H1R0034	
	203H1R0035	

% of Attendance	Sessional Marks	
	Theory	Practical
	I	II
100%	22	21
95%	19	19
85%	21	21
100%	21	21
100%	20	20
100%	22	22
90%	21	21
100%	20	21
100%	18	20
90%	20	21
100%	19	20
100%	22	21
100%	20	21
95%	21	21
100%	20	20
100%	21	21
100%	20	20
100%	22	22
100%	20	20
95%	21	21
100%	18	19
100%	21	20
100%	22	22
100%	20	21
100%	21	21
100%	21	20
100%	21	21
95%	19	19

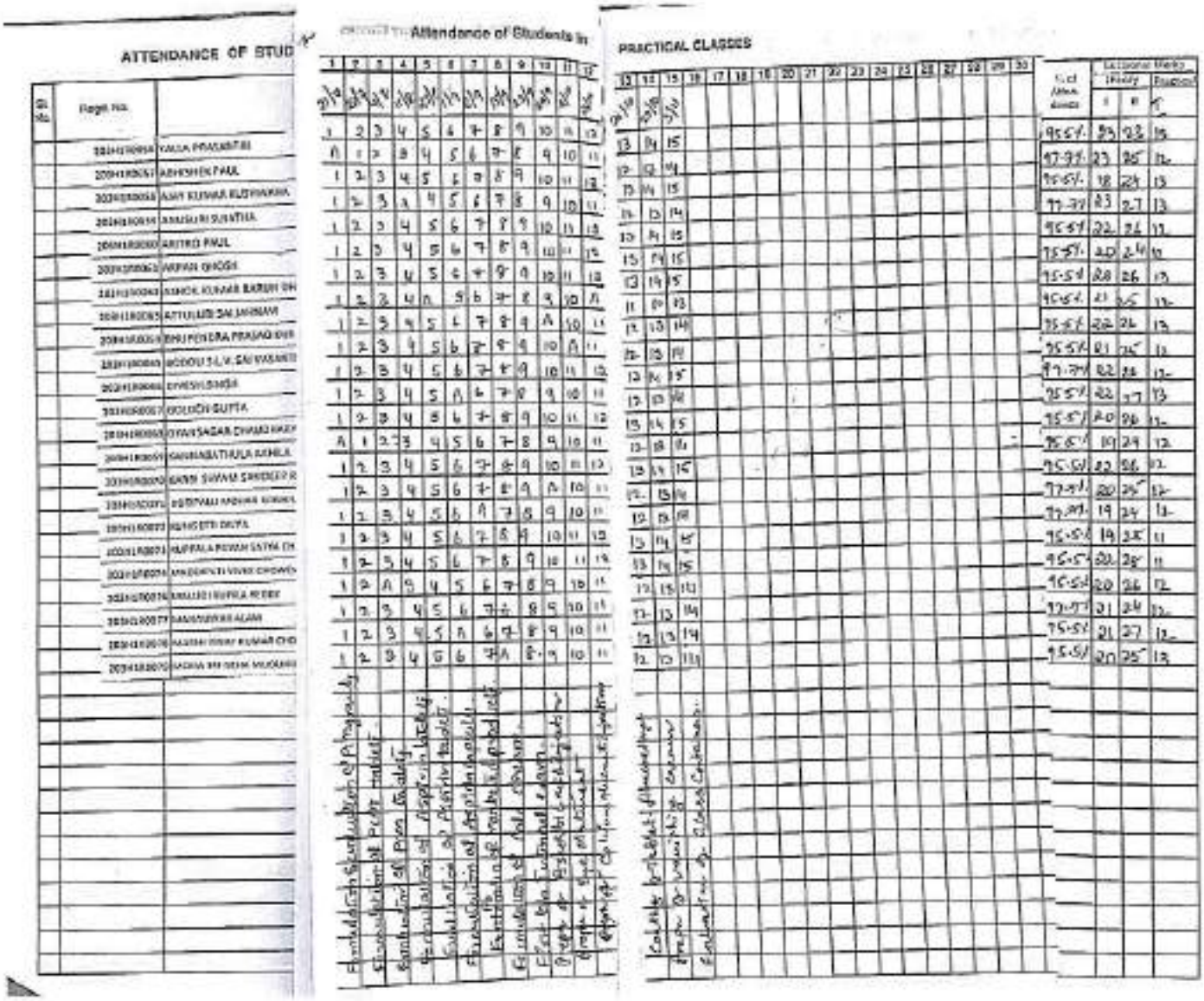
ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM- 533 437

ATTENDANCE OF STUD

Attendance of Students in

PRACTICAL CLASSES



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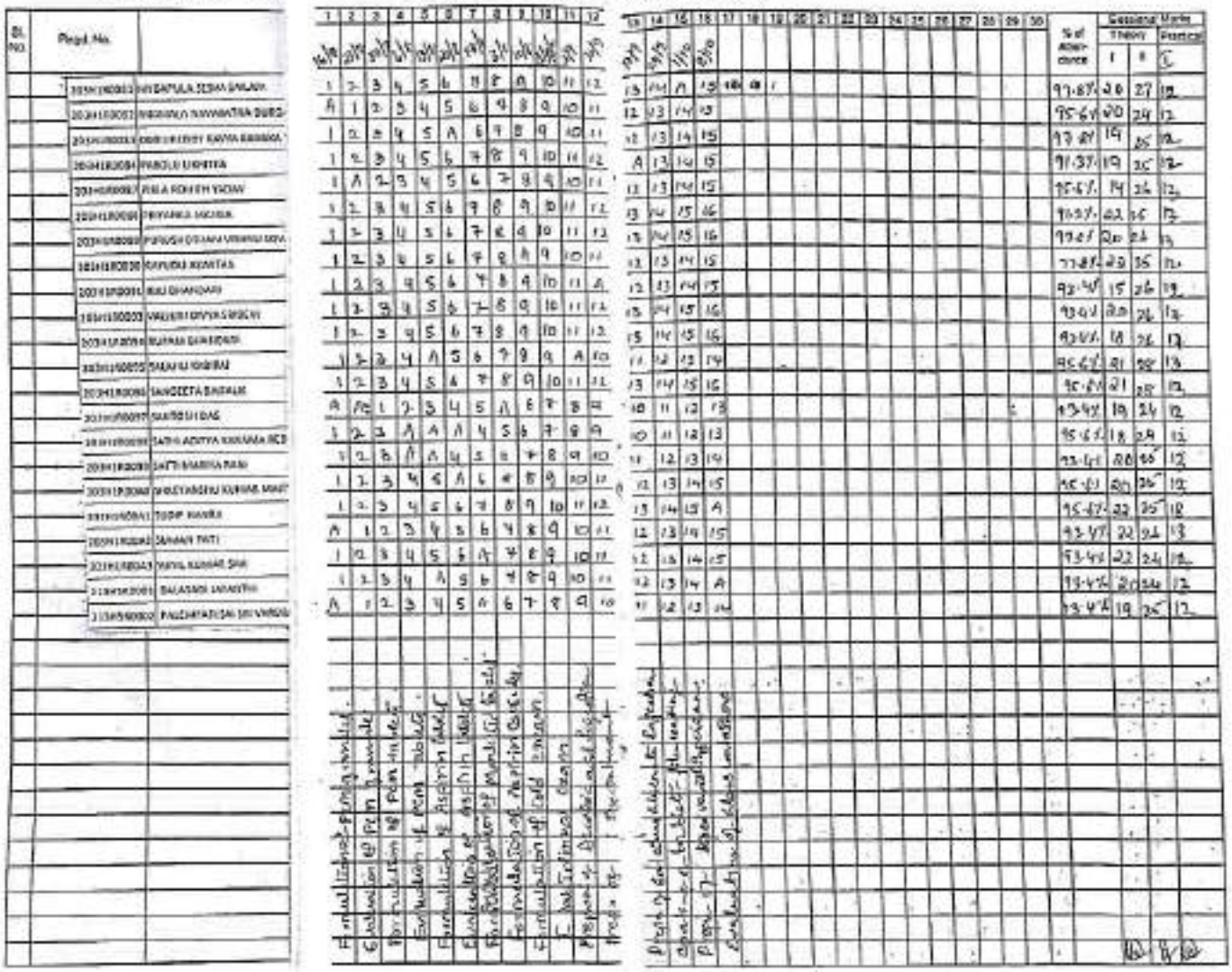

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BP 508 P. PHARMACOGNOSY AND PHYTOCHEMISTRY II (Practical)

4 Hours/Week

1. Morphology, histology and powder characteristics & extraction & detection of: Cinchona, Cinnamon, Senna, Clove, Ephedra, Fennel and Coriander
2. Exercise involving isolation & detection of active principles
   a. Caffeine - from tea dust.
   b. Diosgenin from Dioscorea
   c. Atropine from Belladonna
   d. Sennosides from Senna
3. Separation of sugars by Paper chromatography
4. TLC of herbal extract
5. Distillation of volatile oils and detection of phytoconstitutents by TLC
6. Analysis of crude drugs by chemical tests: (i) Asafoetida (ii) Benzoin (iii) Colophony (iv) Aloes (v) Myrrh

Recommended Books: (Latest Editions)

1. W.C.Evans, Trease and Evans Pharmacognosy, 16th edition, W.B. Sounders & Co., London, 2009.
2. Mohammad Ali. Pharmacognosy and Phytochemistry, CBS Publishers & Distribution, New Delhi.
3. Text book of Pharmacognosy by C.K. Kokate, Purohit, Gokhlae (2007), 37th Edition, Nirali Prakashan, New Delhi.
4. Herbal drug industry by R.D. Choudhary (1996), Ist Edn, Eastern Publisher, New Delhi.
5. Essentials of Pharmacognosy, Dr.SH.Ansari, IInd edition, Birla publications, New Delhi, 2007
6. Herbal Cosmetics by H.Pande, Asia Pacific Business press, Inc, New Delhi.
7. A.N. Kalia, Textbook of Industrial Pharmacognosy, CBS Publishers, New Delhi, 2005.
8. R Endress, Plant cell Biotechnology, Springer-Verlag, Berlin, 1994.
9. Pharmacognosy & Pharmacobiotechnology. James Bobbers, Marilyn KS, VE Tylor.
10. The formulation and preparation of cosmetic, fragrances and flavours.
11. Remington's Pharmaceutical sciences.
12. Text Book of Biotechnology by Vyas and Dixit.
13. Text Book of Biotechnology by R.C. Dubey.

BP508P III I BPHARM PHARMACOGNOSY AND PHYTOCHEMISTRY - II PRACTICAL

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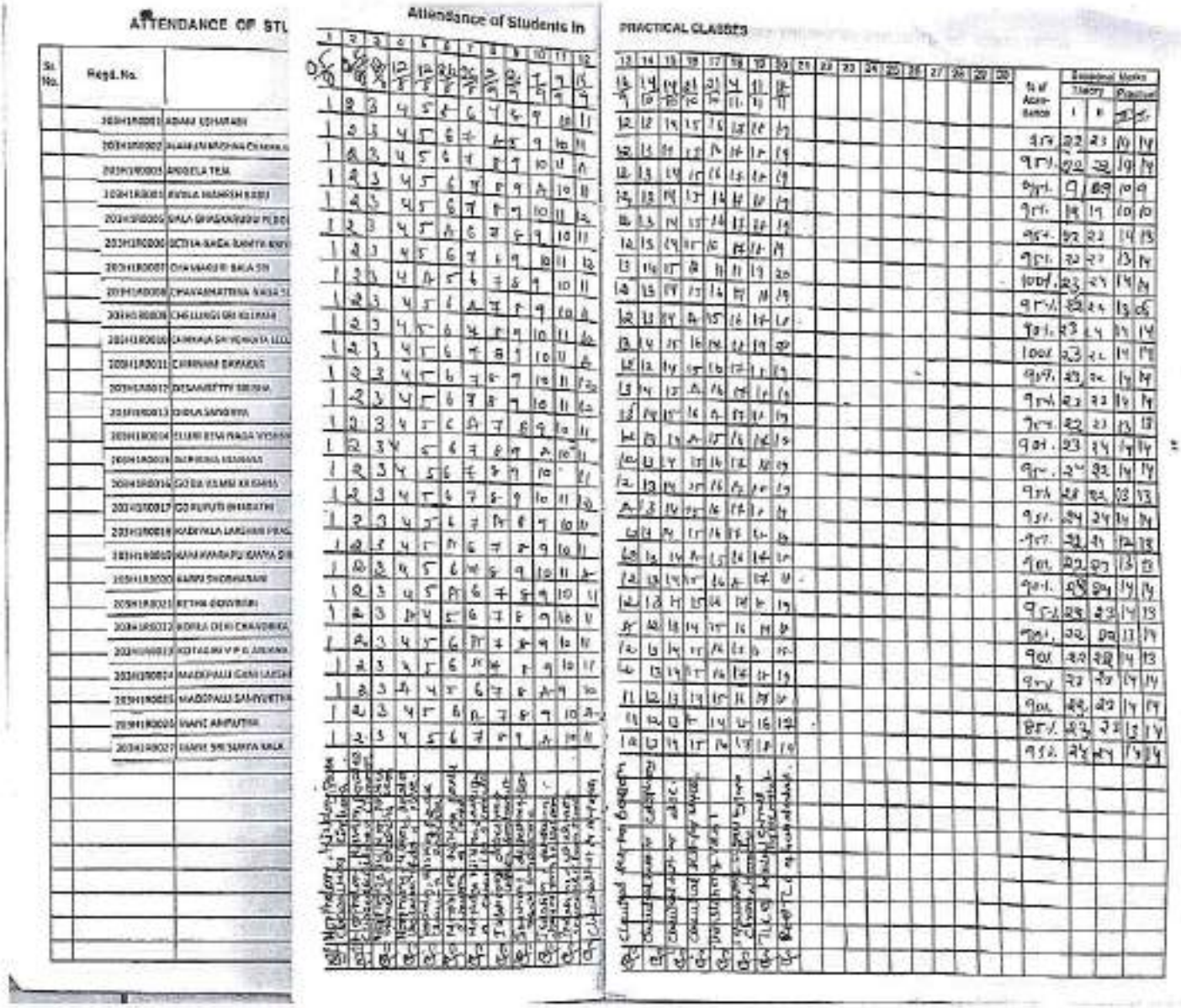

ADITYA COLLEGE OF PHARMACY SUBAMPALEM

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SUBAMPALEM

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PRACTICAL CLASSES

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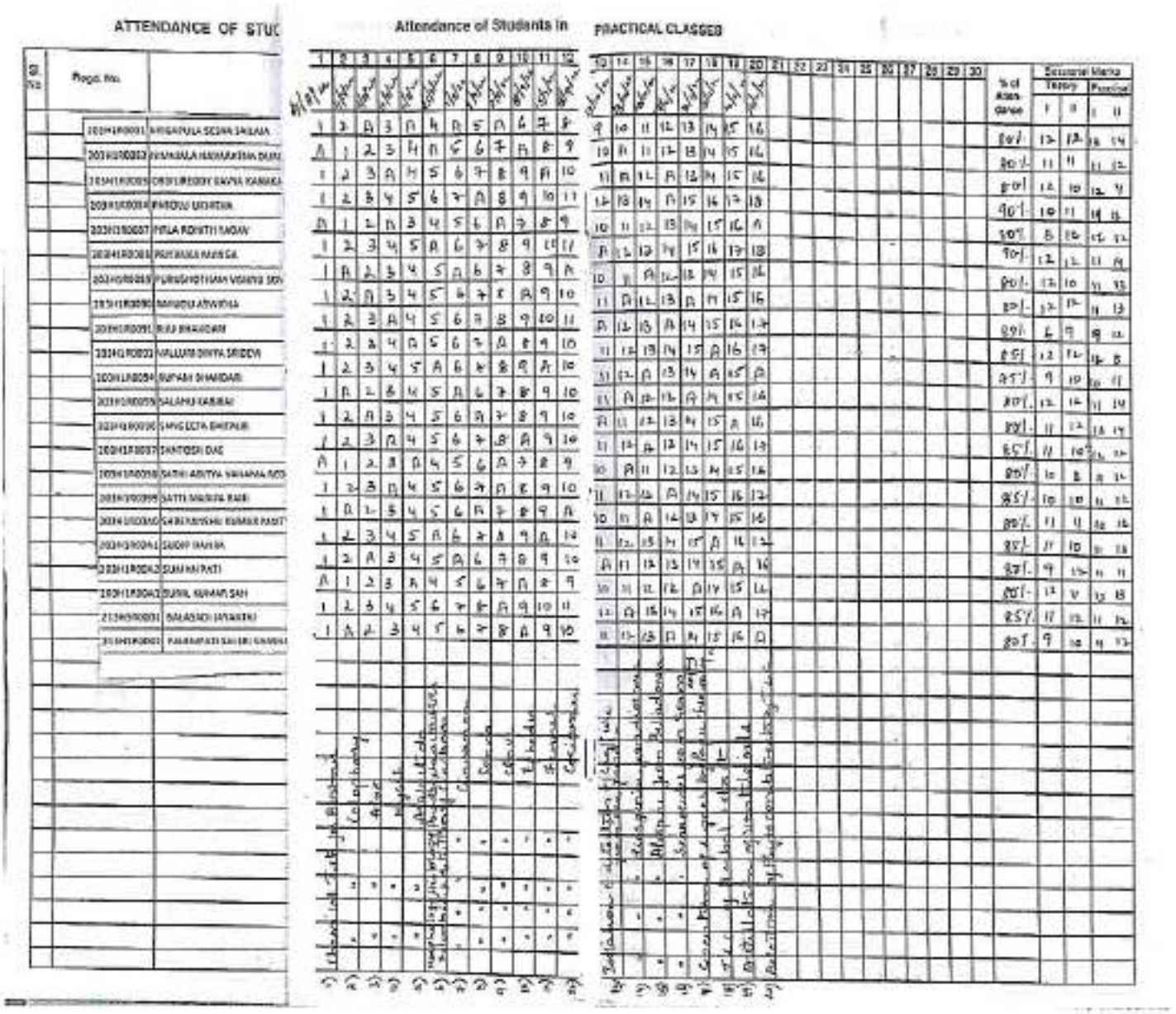

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BP607P. MEDICINAL CHEMISTRY- III (Practical)

4 Hours / week

I Preparation of drugs and intermediates

1 Sulphanilamide

2 7-Hydroxy, 4-methyl coumarin

3 Chlorobutanol

4 Triphenyl imidazole

5 Tolbutamide

6 Hexamine

II Assay of drugs

1 Isonicotinic acid hydrazide

2 Chloroquine

3 Metronidazole

4 Dapsone

5 Chlorpheniramine maleate

6 Benzyl penicillin

III Preparation of medicinally important compounds or intermediates by Microwave irradiation technique

IV Drawing structures and reactions using chem draw®

V Determination of physicochemical properties such as logP, clogP, MR, Molecular weight, Hydrogen bond donors and acceptors for class of drugs course content using drug design software Drug likeliness screening (Lipinskies RO5)

Recommended Books (Latest Editions)

1. Wilson and Giswold's Organic medicinal and Pharmaceutical Chemistry.
2. Foye's Principles of Medicinal Chemistry.
3. Burger's Medicinal Chemistry, Vol I to IV.
4. Introduction to principles of drug design- Smith and Williams.
5. Remington's Pharmaceutical Sciences.
6. Martindale's extra pharmacopoeia.

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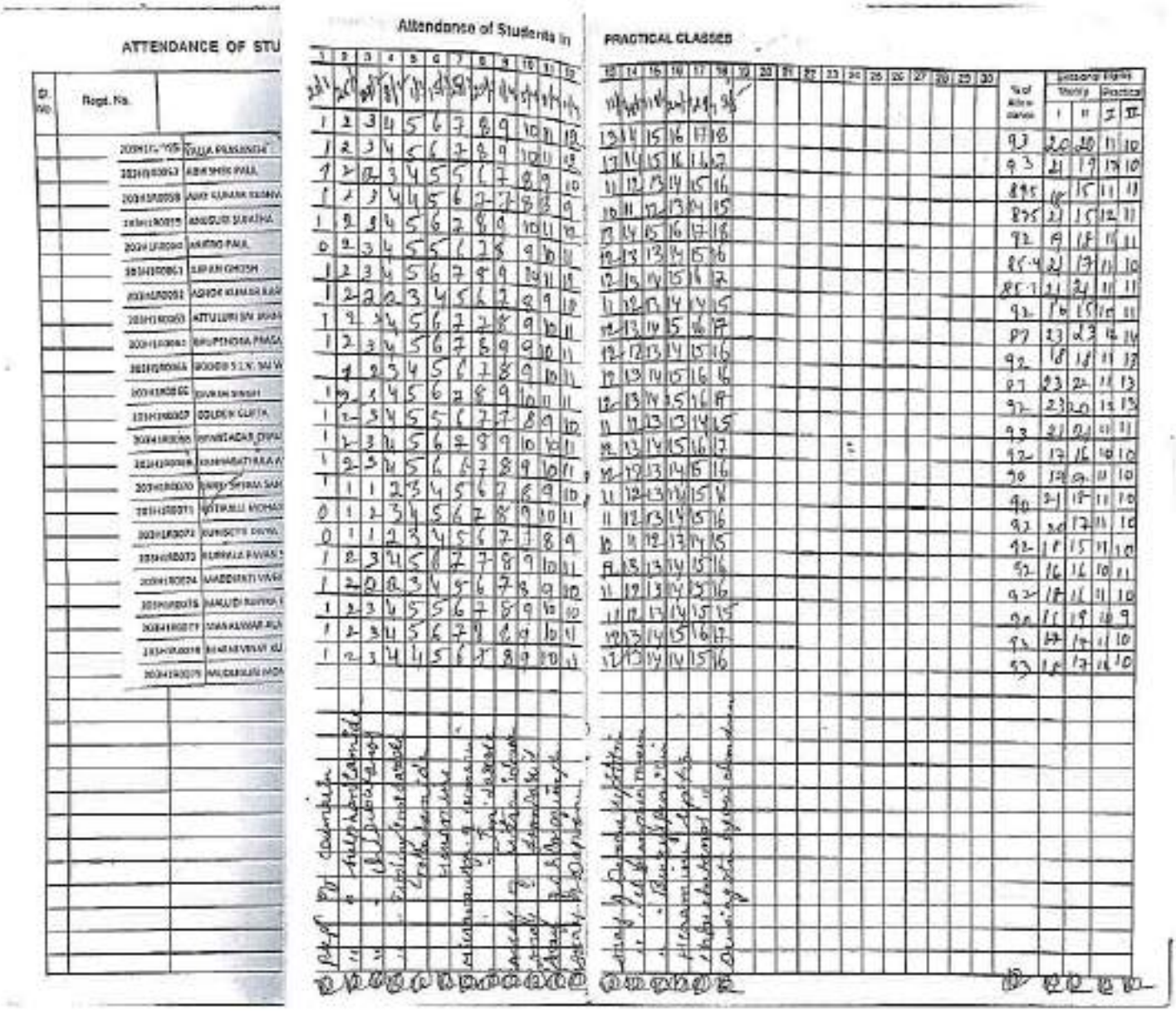
7. Organic Chemistry by I.L. Finar, Vol. II.
8. The Organic Chemistry of Drug Synthesis by Lednicer, Vol. 1-5.
9. Indian Pharmacopoeia.
10. Text book of practical organic chemistry- A.I Vogel.

BP607P III / II B.PHARM MEDICINAL CHEMISTRY -3

PRACTICAL



ATTENDANCE OF STUD

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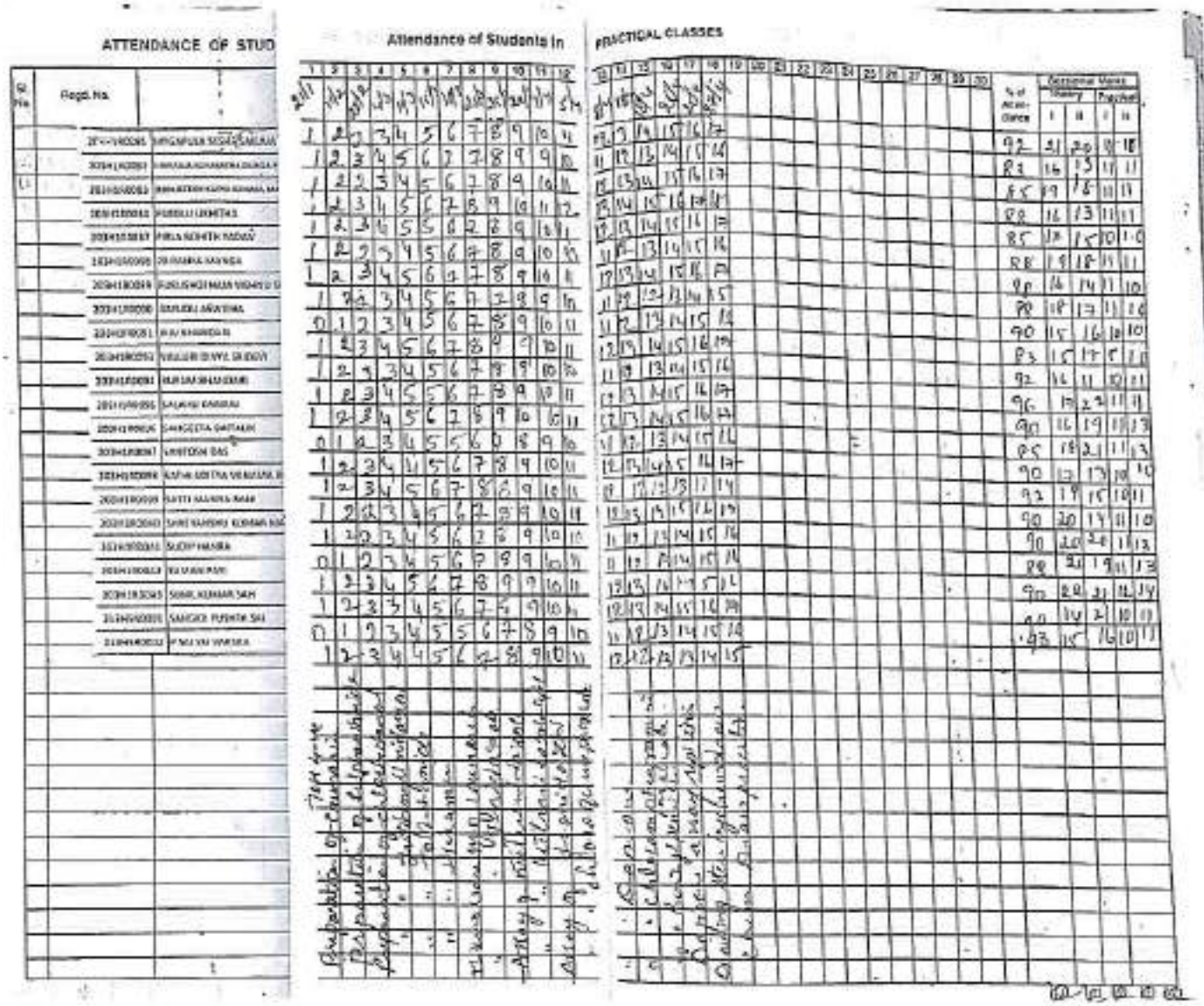

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BP 608 P. PHARMACOLOGY-III (Practical)

4Hrs/Week

1. Dose calculation in pharmacological experiments
2. Antiallergic activity by mast cell stabilization assay
3. Study of anti-ulcer activity of a drug using pylorus ligand (SHAY) rat model and NSAIDS induced ulcer model.
4. Study of effect of drugs on gastrointestinal motility
5. Effect of agonist and antagonists on guinea pig ilcum
6. Estimation of serum biochemical parameters by using semi- autoanalyser
7. Effect of saline purgative on frog intestine
8. Insulin hypoglycemic effect in rabbit
9. Test for pyrogens (rabbit method)
10. Determination of acute oral toxicity (LD50) of a drug from a given data
11. Determination of acute skin irritation / corrosion of a test substance
12. Determination of acute eye irritation / corrosion of a test substance
13. Calculation of pharmacokinetic parameters from a given data
14. Biostatistics methods in experimental pharmacology(student's t test, ANOVA)
15. Biostatistics methods in experimental pharmacology (Chi square test, Wilcoxon Signed Rank test)

**Experiments are demonstrated by simulated experiments/videos*

Recommended Books (Latest Editions)

1. Rang H. P., Dale M. M., Ritter J. M., Flower R. J., Rang and Dale's Pharmacology, Churchil Livingstone Elsevier
2. Katzung B. G., Masters S. B., Trevor A. J., Basic and clinical pharmacology, Tata Mc Graw-Hill
3. Goodman and Gilman's, The Pharmacological Basis of Therapeutics
4. Marry Anne K. K., Lloyd Yee Y., Brian K. A., Robbin L.C., Joseph G. B., Wayne A. K., Bradley R.W., Applied Therapeutics, The Clinical use of Drugs. The Point Lippincott Williams & Wilkins
5. Mycek M.J, Gelnet S.B and Perper M.M. Lippincott's Illustrated Reviews-Pharmacology
6. K.D.Tripathi. Essentials of Medical Pharmacology, , JAYPEE Brothers Medical Publishers (P) Ltd, New Delhi.
7. Sharma H. L., Sharma K. K., Principles of Pharmacology, Paras medical publisher Modern Pharmacology with clinical Applications, by Charles R.Craig& Robert,
8. Ghosh MN. Fundamentals of Experimental Pharmacology. Hilton & Company, Kolkata,
9. Kulkarni SK. Handbook of experimental pharmacology. VallabhPrakashan,
10. N.Udupa and P.D. Gupta, Concepts in Chronopharmacology.

BP608P III / II B. PHARM PHARMACOLOGY - III

PRACTICAL

ATTENDANCE OF STU...

Attendance of Students in PRACTICAL CLASSES

Sl. No.	Regd. No.	Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	% of Attendance	Sessional Marks Theory I	Sessional Marks Theory II	Sessional Marks Practical I	Sessional Marks Practical II
	20341R0056	YALLA PRASANTH	0	01	02	03	04	05	06	07	08	09	10	11	11	11	12																	21	22	13	15
	20341R0057	ABHISHEK PAUL	01	01	02	03	04	05	05	06	07	08	09	10	10	11	12																	22	21	14	13
	20341R0058	AJAY KUMAR KUSHWA...	0	01	01	02	03	04	05	06	07	08	09	10	11	12	13																	20	18	12	13
	20341R0059	ANJSURI SUJATHA	01	01	01	02	03	04	05	06	07	08	09	11	10	11	12																	24	23	14	13
	20341R0060	ARITRO PAUL	0	01	02	03	04	05	06	07	08	09	09	10	11	12	13																	21	15	14	13
	20341R0061	ARPAN GHOSH	0	01	02	03	04	05	05	06	07	08	09	11	10	11	12																	15	21	13	14
	20341R0062	ASHOK KUMAR BARLA...	0	0	01	02	03	04	05	06	07	08	08	09	10	11	12																	22	23	14	14
	20341R0063	ATTULURI SAI JAYANT...	01	01	02	03	04	05	06	07	07	08	09	10	11	12	13																	22	23	13	14
	20341R0064	BHUPENDRA PRASAD K...	01	02	03	04	04	05	06	07	08	08	09		10	11	12																	24	23	14	14
	20341R0065	BODDU S.L.V. SAI VASA...	01	01	02	03	04	05	06	06	07	08	09		10	11	13																	20	22	13	14
	20341R0066	DINESH SINGH	0	01	02	03	04	05	06	07	08	09	10	11	12	13	14																	23	19	14	15
	20341R0067	GOLDEN GUPTA	0	01	02	03	04	05	06	07	08	09	10	11	12	13	14																	20	23	14	14
	20341R0068	GYANSAGAR CHAUDHA...	0	01	02	03	04	05	06	07	07	08	09	10	11	12	13																	23	22	14	14
	20341R0069	KAVURAMTHULA ANIL...	0	01	01	02	03	04	05	06	07	08	09	10	11	12	13																	20	21	14	13
	20341R0070	KARRI SHYAM SANDEEP	0	01	02	03	04	05	06	07	08	08	09	10	11	12	13																	22	23	13	14
	20341R0071	KOTIPALLI MOHAN K...	01	02	03	04	05	05	06	07	08	09	10	11	12	13	14																	24	23	14	14
	20341R0072	KUMBETTI DIVYA	01	02	03	03	04	05	06	07	08	09	09	10	10	11	12																	23	22	14	14
	20341R0073	KUPPALA PAVAN SATY...	01	01	02	03	04	05	06	07	08	09	10	11	12	13	13																	22	22	12	14
	20341R0074	MADDIPATI VIJAY CHO...	0	01	02	03	03	04	05	06	07	08	09	10	11	12	12																	20	23	12	14
	20341R0075	MALLIDI RUPESH REDD...	0	01	02	03	04	05	06	07	08	09	10	11	12	13	14																	23	22	14	14
	20341R0077	MANAUWAR ALAM	01	02	03	03	04	05	06	06	07	08	09	10	11	11	12																	22	22	13	14
	20341R0078	MARNI VINAY KUMAR	01	01	02	03	04	04	05	06	07	08	09	10	10	11	12																	22	23	13	13
	20341R0079	MUDUNURI MOHA...	01	02	02	03	04	05	06	07	08	08	09	10	11	12	12																	24	22	14	13

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BP701T. INSTRUMENTAL METHODS OF ANALYSIS (Theory)

45 Hours

Scope: This subject deals with the application of instrumental methods in qualitative and quantitative analysis of drugs. This subject is designed to impart a fundamental knowledge on the principles and instrumentation of spectroscopic and chromatographic technique. This also emphasizes on theoretical and practical knowledge on modern analytical instruments that are used for drug testing.

Objectives: Upon completion of the course the student shall be able to

1. Understand the interaction of matter with electromagnetic radiations and its applications in drug analysis
2. Understand the chromatographic separation and analysis of drugs.
3. Perform quantitative & qualitative analysis of drugs using various analytical instruments.

Course Content:

UNIT –I **10 Hours**

UV Visible spectroscopy

Electronic transitions, chromophores, auxochromes, spectral shifts, solvent effect on absorption spectra, Beer and Lambert's law, Derivation and deviations.

Instrumentation - Sources of radiation, wavelength selectors, sample cells, detectors- Photo tube, Photomultiplier tube, Photo voltaic cell, Silicon Photodiode.

Applications - Spectrophotometric titrations, Single component and multi component analysis

Fluorimetry

Theory, Concepts of singlet, doublet and triplet electronic states, internal and external conversions, factors affecting fluorescence, quenching, instrumentation and applications

UNIT –II **10 Hours**

IR spectroscopy

Introduction, fundamental modes of vibrations in poly atomic molecules, sample handling, factors affecting vibrations

Instrumentation - Sources of radiation, wavelength selectors, detectors - Golay cell, Bolometer, Thermocouple, Thermister, Pyroelectric detector and applications

Flame Photometry-Principle, interferences, instrumentation and applications

Atomic absorption spectroscopy- Principle, interferences, instrumentation and applications

Nepheloturbidometry- Principle, instrumentation and applications

UNIT –III **10 Hours**

Introduction to chromatography

Adsorption and partition column chromatography-Methodology, advantages, disadvantages and applications.

Thin layer chromatography- Introduction, Principle, Methodology, Rf values, advantages, disadvantages and applications.

Paper chromatography-Introduction, methodology, development techniques, advantages, disadvantages and applications

Electrophoresis– Introduction, factors affecting electrophoretic mobility, Techniques of paper, gel, capillary electrophoresis, applications

UNIT –IV **08 Hours**

Gas chromatography - Introduction, theory, instrumentation, derivatization, temperature programming, advantages, disadvantages and applications

High performance liquid chromatography (HPLC)-Introduction, theory, instrumentation, advantages and applications.

UNIT –V **07 Hours**

Ion exchange chromatography- Introduction, classification, ion exchange resins, properties, mechanism of ion exchange process, factors affecting ion exchange, methodology and applications

Gel chromatography- Introduction, theory, instrumentation and applications

Affinity chromatography- Introduction, theory, instrumentation and applications

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BP105P IV / I B·PHARM INSTRUMENTAL

METHOD OF ANALYSIS

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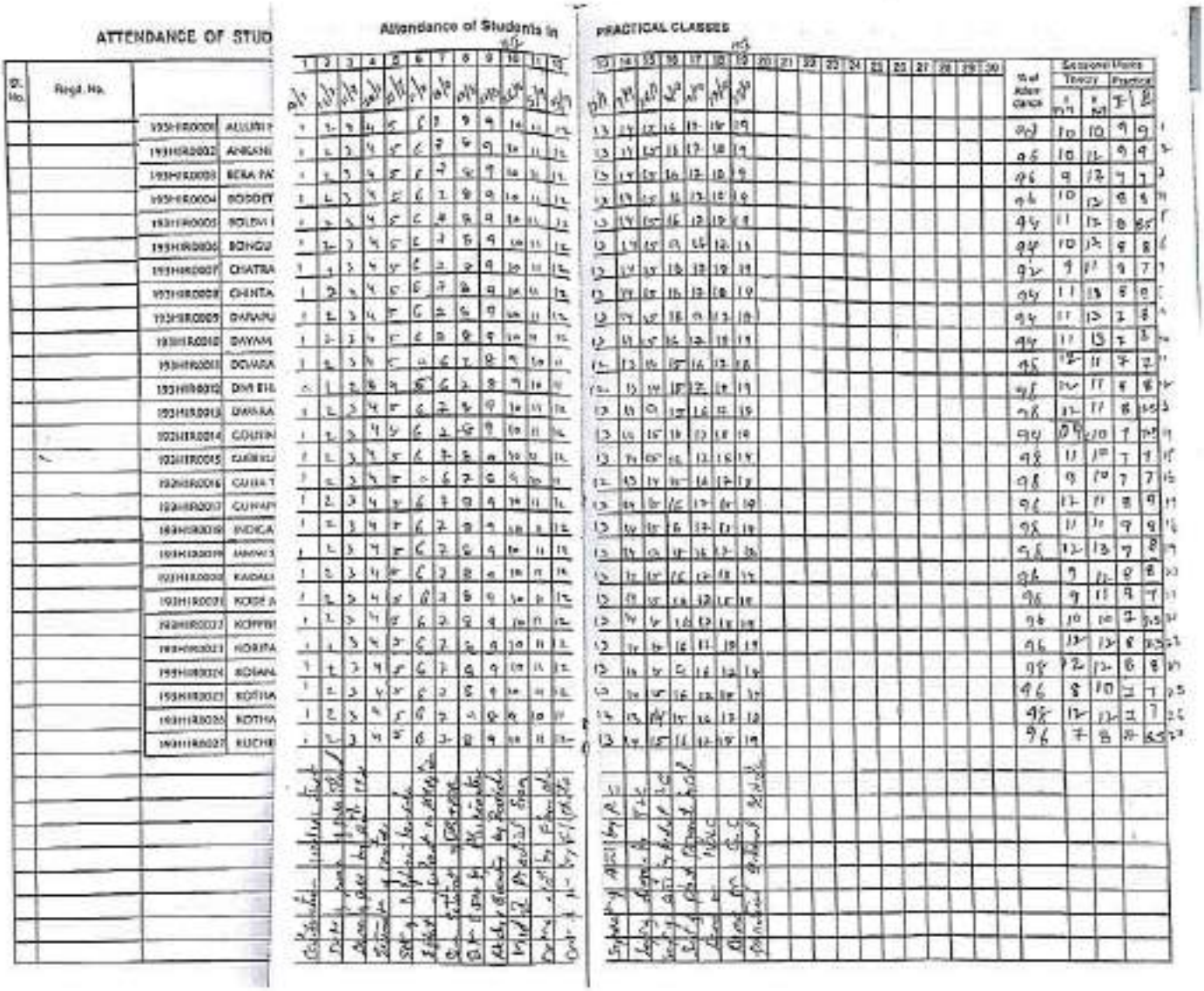

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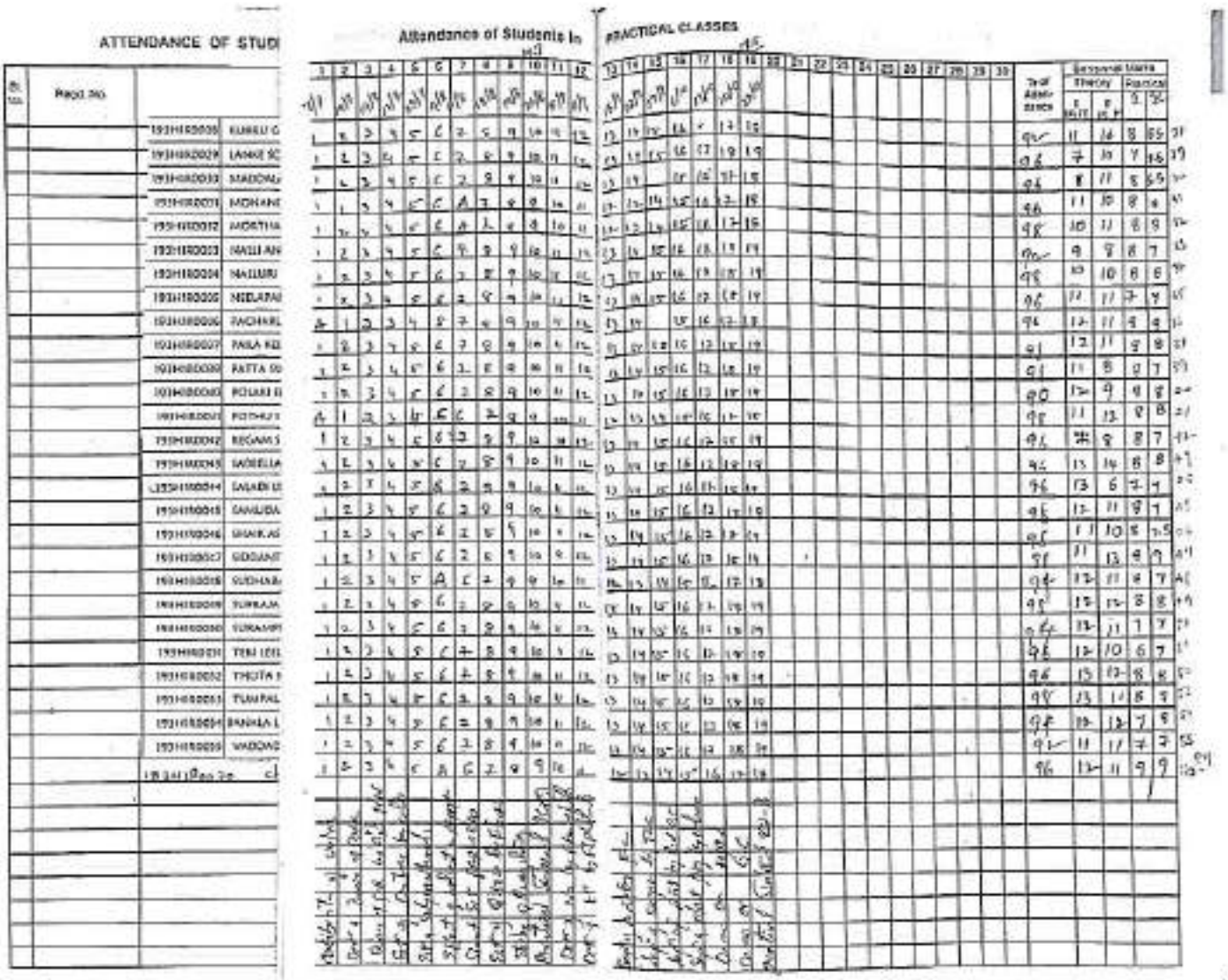

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ATTENDANCE OF STUDENTS IN

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Sl. No.	Regd. No.	Name	% of Attendance	Sessional Marks Theory I	Sessional Marks Theory II	Sessional Marks Practical I	Sessional Marks Practical II
	193H1R0090	SUMIT KHAJURIA		21	18	10	18
	193H1R0091	SUMIT KUMAR GUPTA		14	14	10	13
	193H1R0092	SUNNY KUMAR		17	13	11	10
	193H1R0093	TAYIB AHMAD RAVB		20	18	10	12
	193H1R0094	TEERATHI RANJINI KUMAR		21	18	11	11
	193H1R0095	TIRILOCHANA ADABALA		19	10	11	11
	193H1R0096	UMACHARLA SAI PRASAN		21	18	9	11
	193H1R0097	VANAMALI KEERTHANA		22	20	11	11
	193H1R0098	VIBHA YOGENDRA MHA		19	17	11	11
	193H1R0099	VAJJALA MADHAVI		20	18	10	14
	193H1R0040	YALLA ALEKHYA DEVI		21	17	11	11
	193H1R0041	DEVARA SRI SAI NIHARIKA		23	19	11	13
	193H1R0042	UMAVIDI VEERA MANI G		24	18	11	13
	193H1R0043	DONEPALLI SOMESWAR		23	20	11	12
	193H1R0044	MALLIDI MEGHANA		22	18	10	10
	193H1R0045	YALLA SARUNA		21	16	11	12
	193H1R0046	JYOTHULA AMRICA NAG		22	18	11	14
	193H1R0047	PUNAM KUMARI GUPTA		23	18	11	14
	193H1R0048	NIRAJ KUMAR GAUND		24	16	11	12
	193H1R0049	AJAY KUMAR YADAV		20	18	10	14
	193H1R0080	RADHE KRISHNA KUSHW		28	17	11	13
	193H1R0081	RAMANITH RAY	85	25	16	11	13
	193H1R0082	ARUN BHARDAR	96	22	16	13	14
	193H1R0083	FATHIMA JOHRA		20	11	11	12
	193H1R0084	ROSHAN PANDEY	90	21	18	11	11
	193H1R0085	ARATI KUMARI MAJHI		20	16	11	12
	193H1R0086	NIRAJ KUMAR SAH		21	17	11	13
	193H1R0087	SHIVAM MANOHAR		21	18	10	14
	203H5R0001	LEELA SAI VENKATA BA		19	16	10	12
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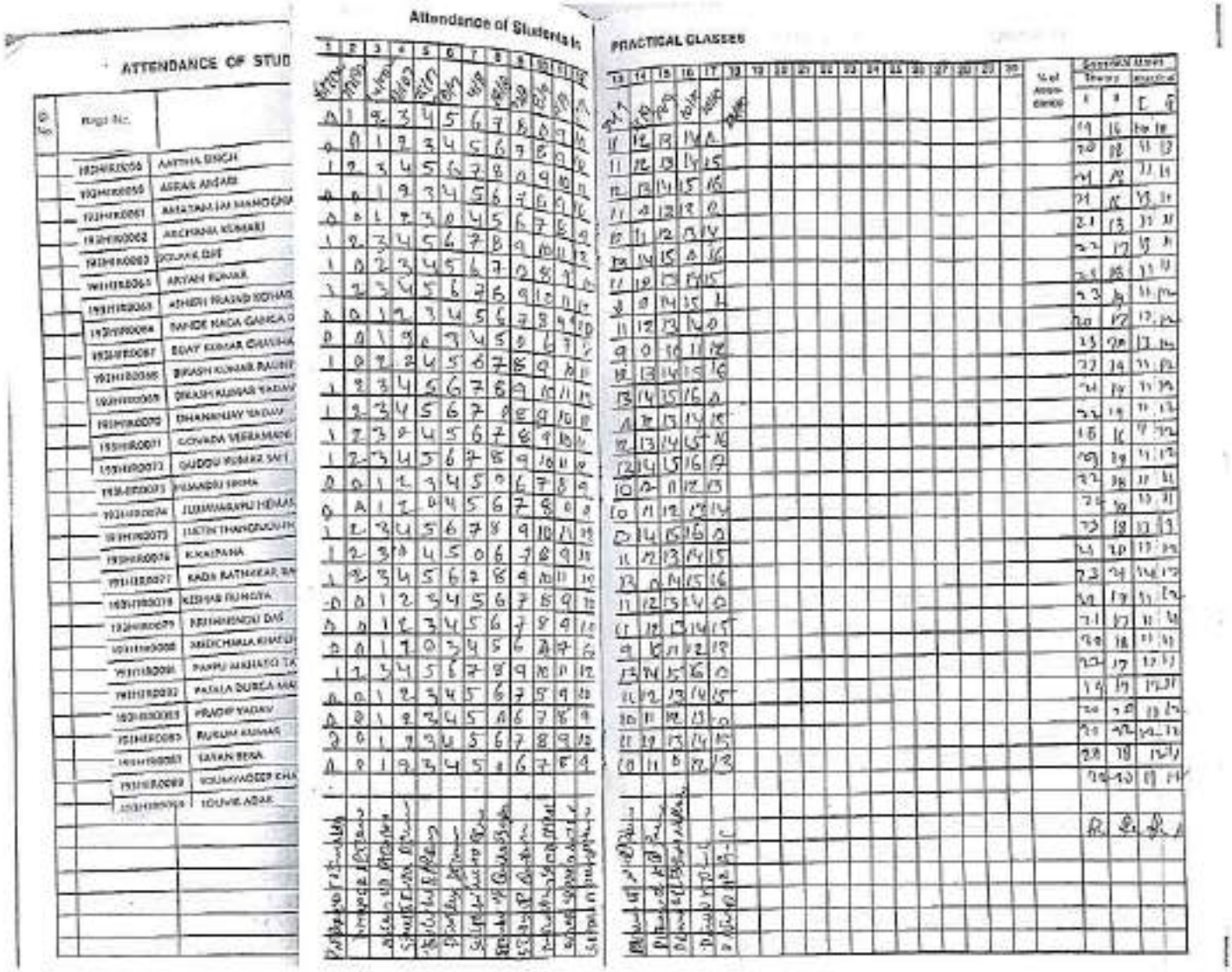

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PHARMACEUTICS PRACTICAL - I
(MPH 105PA)

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.

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 similarityfactors.
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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DESIGN, DEVELOPMENT AND EVALUATION OF TENOFOVIR ALAFENAMIDE FUMARATE EMULGEL.

Dissertation submitted to

Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the requirements for the degree of Master of Pharmacy

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

SUBMITTED BY

:

GODAVARI LAKSHMI RAMA KRISHNA PRAVALLIKA (21SH1S0301)

UNDER THE GUIDANCE OF

SPN KUMAR, *M. Pharm.*

ASSOC. PROFESSOR

ADITYA COLLEGE OF PHARMACY

SURAMPALEM - 533437

2022-23

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Approved by AICTE & PCI - NEW DELHI, Affiliated to JNTUK, KAKINADA
(formerly known as Sri Sai Aditya Institute of Pharmaceutical Science & Research)
Ph: 99498 76664
Email: office@acop.edu.in
Website: www.acop.edu.in

CERTIFICATE

This is to certify that the dissertation entitled DESIGN, DEVELOPMENT AND EVALUATION OF TENOFOVIR ALAFENAMIDE FUMARATE EMULGEL was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the award of the degree of **Master of pharmacy** is a record of original research work carried out by GODAVARI LAKSHMI RAMA KRISHNA [illegible]IKA (213H1S0301).She has done this research work under the supervision of Mr. SPN Kumar, *M. Pharm* and it has not been previously submitted to any other university or academic institution for any higher degree.

Dr. K. Ravishankar, M.Pharm, *Ph.D*
Principal and Professor,
Aditya College of Pharmacy,
Surampalem - 533437.
Place: Surampalem

Date:

Aditya College of Pharmacy
Surampalem-533 437

External Examiner

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM- 533 437

ADVANCED PHARMACOLOGY - I
(MPL 102T)

Scope

The subject is designed to strengthen the basic knowledge in the field of pharmacology and to impart recent advances in the drugs used for the treatment of various diseases. In addition, this subject helps the students to understand the concepts of drug action and mechanisms involved

Objectives

Upon completion of the course the student shall be able to:

- Discussthe pathophysiology and pharmacotherapy of certain diseases.
- Explain the mechanism of drug actions at cellular and molecular level
- Understand the adverse effects, contraindications and clinical uses of drugs used in treatment of diseases

THEORY — 60 Hrs

1. General Pharmacology — 12 Hrs

   a Pharmacokinetics: The dynamics of drug absorption, distribution, biotransformation and elimination. Concepts of linear and non-linear compartment models. Significance of Protein binding.

   b Pharmacodynamics: Mechanism of drug action and the relationship between drug concentration and effect. Receptors, structural and functional families of receptors, quantitation of drug receptors interaction and elicited effects.

2 Neurotransmission — 12 Hrs

   a General aspects and steps involved in neurotransmission.

   b. Neurohumoral transmission in autonomic nervous system (Detailed study about neurotransmitters- Adrenaline and Acetylcholine).

   c. Neurohumoral transmission in central nervous system (Detailed study about neurotransmitters- histamine, serotonin, dopamine, GABA, glutamate and glycine).

   d. Non adrenergic non cholinergic transmission (NANC). Co-transmission

   Systemic Pharmacology

   A detailed study on pathophysiology of diseases, mechanism of action, pharmacology and toxicology of existing as well as novel drugs used in the following systems

   Autonomic Pharmacology

   Para sympathomimetics and lytics, sympathomimetics and lytics, agents affecting neuromuscular junction.

3	Central nervous system Pharmacology General and local anesthetics Sedatives and hypnotics, drugs used to treat anxiety. Depression, psychosis, mania, epilepsy, neurodegenerative diseases. Narcotic and non-narcotic analgesics.	12 Hrs
4	Cardiovascular Pharmacology Diuretics, antihypertensives, antiischemics, anti- arrhythmics, drugs for heart failure and hyperlipidemia. Hematinics, coagulants, anticoagulants, fibrinolytics and anti- platelet drugs	12 Hrs
5	Autocoid Pharmacology The physiological and pathological role of Histamine, Serotonin, Kinins Prostaglandins Opioid autocoids. Pharmacology of antihistamines, 5 HT antagonists.	12 Hrs

REFEERENCES

1. The Pharmacological Basis of Therapeutics. Goodman and Gillman's
2. Principles of Pharmacology. The Pathophysiologic basis of drug Therapy by David E Golan, Armen H, Tashjian Jr, Ehrin J, Armstrong, April W, Armstrong, Wolters, Kluwer-Lippincott Williams & Wilkins Publishers.
3. Basic and Clinical Pharmacology by B.G Katzung
4. Handbook of Clinical Pharmacokinetics by Gibaldi and Prescott.
5. Applied Biopharmaceutics and Pharmacokinetics by Leon Shargel and Andrew B.C.Yu.
6. Graham Smith. Oxford textbook of Clinical Pharmacology.
7. Avery Drug Treatment
8. Dipiro Pharmacology. Pathophysiological approach.
9. Green Pathophysiology for Pharmacists.
10. Robbins & Cortan Pathologic Basis of Disease, 9thEd. (Robbins Pathology)
11. A Complete Textbook of Medical Pharmacology by Dr. S.K Srivastava published by APC Avichal Publishing Company
12. KD.Tripathi. Essentials of Medical Pharmacology.
13. Modern Pharmacology with Clinical Applications. Craig Charles R. & Stitzel Robert E., Lippincott Publishers.
14. Clinical Pharmacokinetics & Pharmacodynamics: Concepts and Applications – Malcolm Rowland and Thomas N.Tozer, Wolters Kluwer. Lippincott Williams & Wilkins Publishers.
15. Applied Biopharmaceutics and Pharmacokinetics, Pharmacodynamics and Drug metabolism for industrial scientists.
16. Modern Pharmacology, Craig CR. & Stitzel RE. Little Brown & Company.

ADITYA COLLEGE OF PHARMACY 192 SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM-533 437

PHARMACOLOGICAL AND TOXICOLOGICAL SCREENING METHODS - I

(MPL 103T)

Scope

This subject is designed to impart the knowledge on preclinical evaluation of drugs and recent experimental techniques in the drug discovery and development. The subject content helps the student to understand the maintenance of laboratory animals as per the guidelines, basic knowledge of various in-vitro and in-vivo preclinical evaluation processes

Objectives

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

- Appraise the regulations and ethical requirement for the usage of experimental animals.
- Describe the various animals used in the drug discovery process and good laboratory practices in maintenance and handling of experimental animals
- Describe the various newer screening methods involved in the drug discovery process
- Appreciate and correlate the preclinical data to humans

THEORY 60 Hrs

1. Laboratory Animals — 12 Hrs

   Common laboratory animals: Description, handling and applications of different species and strains of animals.
   Transgenic animals: Production, maintenance and applications Anaesthesia and euthanasia of experimental animals.
   Maintenance and breeding of laboratory animals. CPCSEA guidelines to conduct experiments on animals
   Good laboratory practice.
   Bioassay- Principle, scope and limitations and methods

2. Preclinical screening of new substances for the pharmacological activity using in vivo, invitro and other possible animal alternative models. — 12 Hrs

   General principles of preclinical screening. CNS Pharmacology: behavioral and muscle co ordination, CNS stimulants and depressants, anxiolytics, anti-psychotics, antiepileptics and nootropics. Drugs for neurodegenerative diseases like Parkinsonism, Alzheimers and multiple sclerosis. Drugs acting on Autonomic Nervous System.

3. Preclinical screening of new substances for the pharmacological activity using in vivo, invitro and other possible animal alternative models. — 12 Hrs

   Respiratory Pharmacology: anti-asthmatics, drugs for COPD and antiallergics. Reproductive Pharmacology: Aphrodisiacs and antifertility agents Analgesics, anti-inflammatory and antipyreticagents. Gastrointestinal drugs: antiulcer, anti- emetic, anti- diarrheal and laxatives.

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4. Preclinical screening of new substances for the pharmacological activity using in vivo, invitro, and other possible animal alternative models. 12 Hrs
Cardiovascular Pharmacology: antihypertensives, antiarrythmics, antianginal, antiatherosclerotic agents and diuretics. Drugs for metabolic disorders like anti-diabetic, antidyslipidemic agents. Anti cancer agents. Hepatoprotective screening methods.

5. Preclinical screening of new substances for the pharmacological activity using in vivo, in vitro, and other possible animal alternative models. 12 Hrs
Immunomodulators, Immunosuppressants and immunostimulants
General principles of immunoassay: theoretical basis and optimization of immunoassay, heterogeneous and homogenous immunoassay systems. Immuno assay methods evaluation; protocol outline, objectives and preparation. Immunoassay for digoxin and insulin.
Limitations of animal experimentation and alternate animal experiments. Extrapolation of invitro data to preclinical and preclinical to humans.

REFERENCES

1. Biological standardization by J.H.BurnD.J.Finney and I.G.Goodwin
2. Screening methods in Pharmacology by Robert Turner.A
3. Evaluation of drugs activities by Laurence and Bachrach
4. Methods in Pharmacology by Arnold Schwartz.
5. Fundamentals of experimental Pharmacology by M.N.Ghosh
6. Pharmacological experiment on intact preparations by Churchill Livingstone
7. Drug discovery and Evaluation by Vogel H.G.
8. Experimental Pharmacology by R.K.Goyal.
9. Preclinical evaluation of new drugs by S.K.Guta
10. Handbook of Experimental Pharmacology, SK.Kulkarni
11. Practical Pharmacology and Clinical Pharmacy, SK.Kulkarni, 3rd Edition.
12. David R.Gross. Animal Models in Cardiovascular Research, 2nd Edi, Kluwer Academic Publishers, London, UK.
13. Screening Methods in Pharmacology, Robert A.Turner.
14. Rodents for Pharmacological Experiments, Dr.Tapan Kumar chatterjee.
15. Practical Manual of Experimental and Clinical Pharmacology by Bikash Medhi (Author), AjayPrakash (Author)

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Aditya College of Pharmacy
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PRESCRIPTION PATTERN AND DRUG UTILIZATION ANALYSIS IN PATIENTS WITH CARDIOVASCULAR DISORDER

Dissertation submitted to

Jawaharlal Nehru Technological University, Kakinada in partial fulfilment of the requirements for the degree of Master of Pharmacy

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

SUBMITTED BY

GUDAPATI HARSHIKA (23H1S0603)

UNDER THE GUIDANCE OF

Dr. K. Ravishankar, *M. Pharm, Ph.D*

PRINCIPAL AND PROFESSOR

ADITYA COLLEGE OF PHARMACY

SURAMPALEM - 533437

2022-23

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CERTIFICATE

This is to certify that the dissertation entitled PRESCRIPTION PATTERN AND DRUG UTILIZATION ANALYSE IN PATIENTS WITH CARDIOVASCULAR DISORDERS was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment of the requirements for the award of the degree of **Master of pharmacy** is a record of original research work carried out by GUDAPATI HARSHIKA(213H1S0603). They have done this research work under the supervision of Dr. K. Ravishankar, M. Pharm. Ph.D and it has not been previously submitted to any other university or academic institution for any higher degree.

Dr. K. Ravishankar, M.Pharm, *Ph.D*
Principal and Professor,
Aditya College of Pharmacy,
Surampalem- 533437.
Place: Surampalem

Date: 7-10-23

Examiner
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SURAMPALEM-533 437

External Examiner

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PHARMACOLOGY PRACTICAL - I
(MPL 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 handling of laboratory animals.
7. Various routes of drug administration.
8. Techniques of blood sampling, anesthesia and euthanasia of experimental animals.
9. Functional observation battery tests (modified Irwintest)
10. Evaluation of CNS stimulant, depressant, anxiogenics and anxiolytic, anticonvulsant activity.
11. Evaluation of analgesic, anti-inflammatory, local anesthetic, mydriatic and mioticactivity.
12. Evaluation of diureticactivity.
13. Evaluation of antiulcer activity by pylorus ligation method.
14. Oral glucose tolerance test.

PHARMACOLOGY PRACTICAL - II
(MPL 105PB)

Handling of laboratory animals.

1. Isolation and identification of DNA from various sources (Bacteria, Cauliflower, onion, Goatliver).
2. Isolation of RNA from yeast
3. Estimation of proteins by Braford/Lowry's in biological samples.
4. Estimation of RNA/DNA by UV Spectroscopy
5. Gene amplification by PCR.
6. Protein quantification Western Blotting.
7. Enzyme based in-vitro assays (MPO, AChEs, α amylase, α glucosidase).
8. Cell viability assays (MTT/Trypan blue/SRB).
9. DNA fragmentation assay by agarose gel electrophoresis.
10. DNA damage study by Comet assay.
11. Apoptosis determination by fluorescent imaging studies.
12. Pharmacokinetic studies and data analysis of drugs given by different routes of administration using softwares
13. Enzyme inhibition and induction activity
14. Extraction of drug from various biological samples and estimation of drugs in biological fluids using different analytical techniques(UV)
15. Extraction of drug from various biological samples and estimation of drugs in biological fluids using different analytical techniques (HPLC)

IN VITRO ANTIOXIDANT AND ANTICATARACT ACTIVITIES OF ETHANOLIC LEAF EXTRACT OF *CLITORIA TERNATEA*

Dissertation submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA.

In the partial fulfilment of the requirements for the Award of the degree of

MASTER OF PHARMACY

In Pharmacology

Submitted By

G. Balamani

Under the Guidance of

Dr. K Ravishankar M. pharm. Ph.D.

ADITYA COLLEGE OF PHARMACY
SURAMPALEM-533437

September 2013

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CERTIFICATE

This is to certify that the investigation described in this thesis entitled IN VITRO ANTIOXIDANT AND ANTICATARACT ACTIVITIES OF ETHANOLIC LEAF EXTRACT OF *CLITORIA TERNATEA LINN* was submitted by G. BALAMANI (213H1S0604) of Aditya college of pharmacy (Affiliated to JNTU Kakinada) for the partial fulfilment of Degree of Master of Pharmacy in the Department of pharmacology. The Reporter embedded in this thesis was carried out under the Guidance of Dr.K. RAVI SHANKAR M. pharm, Ph.D., PRINCIPAL, Aditya College of Pharmacy, Surampalem.

ADITYA COLLEGE OF PHARMACY SURAMPALEM

Principal,

Dr.K. Ravi Shankar M. pharm, Ph.D.

Aditya college of pharmacy,

Surampallem – 533437

Dist: East Godavari (Ap).

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PHARMACOLOGICAL AND TOXICOLOGICAL SCREENING METHODS-II

(MPL 202T)

Scope:

This subject imparts knowledge on the preclinical safety and toxicological evaluation of drug & new chemical entity. This knowledge will make the student competent in regulatory toxicological evaluation.

Objectives:

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

- Explain the various types of toxicity studies.
- Appreciate the importance of ethical and regulatory requirements for toxicity studies.
- Demonstrate the practical skills required to conduct the preclinical toxicity studies.

THEORY — 60 Hrs

1. Basic definition and types of toxicology (general, mechanistic, regulatory and descriptive) — 12 Hrs
   Regulatory guidelines for conducting toxicity studies OECD, ICH, EPA and Schedule Y
   OECD principles of Good laboratory practice (GLP)
   History, concept and its importance in drug development

2. Acute, sub-acute and chronic- oral, dermal and inhalational studies as per OECD guidelines. — 12 Hrs
   Acute eye irritation, skin sensitization, dermal irritation & dermal toxicity studies.
   Test item characterization- importance and methods in regulatory toxicology studies.

3. Reproductive toxicology studies, Male reproductive toxicity studies, female reproductive studies (segment I and segment III), teratogenecity studies (segment II) — 12 Hrs
   Genotoxicity studies (Ames Test, in vitro and in vivo Micronucleus and Chromosomal aberrations studies)
   Invivo carcinogenicity studies.

4. IND enabling studies (IND studies)- Definition of IND, importance of IND, industry perspective, list of studies needed for IND submission. — 12 Hrs
   Safety pharmacology studies- origin, concepts and importance of safety pharmacology.
   Tier1- CVS, CNS and respiratory safety pharmacology, HERG assay. Tier2- GI, renal and other studies.

5. Toxicokinetics- Toxicokinetic evaluation in preclinical studies, saturation kinetics — 12 Hrs
   Importance and applications of toxicokinetic studies.
   Alternative methods to animal toxicity testing.

REFERENCES

1. Hand book on GLP, Quality practices for regulated non-clinical research and development (http://www.who.int/tdr/publications/documents/glp-handbook.pdf).
2. Schedule Y Guideline: drugs and cosmetics (second amendment) rules, 2005, ministryofhealth andfamilywelfare (department ofhealth) New Delhi
3. Drugs from discovery to approval by RickNG.
4. Animal models in Toxicology, 3rd Edition, Lower and Bryan
5. OECD test guidelines.
6. Principles of toxicology by Karen E.Stine, Thomas M.Brown.
7. Guidance for Industry M3 (R2) Nonclinical Safety Studies for the Conduct of Human Clinical Trials and Marketing Authorization for Pharmaceuticals (http://www.fda.gov/downloads/drugs/guidance compliance regulatory information/ guidances/ ucm073246.pdf)

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EVALUATION OF IN-VIVO ANALGESIC AND ANTI-INFLAMMATORY ACTIVITIES OF ETHANOLIC LEAF EXTRACT OF *CORDIA MYXA*

Dissertation submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

In the partial fulfillment of the requirements for the Award of the degree of

MASTER OF PHARMACY

Submitted by

TEKIMUDI LOVAKUMARI

(Reg.No-213H1S0609)

Under the Guidance of

Dr. K. RAVI SHANKAR M.Pharm, PhD.

ADITYA COLLEGE OF PHARMACY

SURAMPALEM-533437

SEPTEMBER – 2023

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CERTIFICATE

This is to certify that the investigation described in this thesis entitled "Evaluation of In-vivo Analgesic and Anti-inflammatory Activities of Ethanolic Leaf Extract of Cordia myxa" was submitted by **T.Lovakumari (Regd. No.213H1S0609)** student of **Aditya College of Pharmacy (Affiliated to JNTU Kakinada)** for the partial fulfillment of Degree of Master of Pharmacy in the Department of Pharmacology. The Report embedded in this thesis was carried out under the Guidance of **Dr. K. Ravi Shankar M.Pharm**, PhD, Principal and professor of Aditya College of Pharmacy, Surampalem.

Principal

Dr. K. Ravi Shankar M.Pharm, PhD,
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Dist: East Godavari (A.P).

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PHARMACOLOGY PRACTICAL - III
(MPL 205PA)

1. To record the DRC of agonist using suitable isolated tissues preparation.
2. To study the effects of antagonist/potentiating agents on DRC of agonist using suitable isolated tissue preparation.
3. To determine to the strength of unknown sample by matching bioassay by using suitable tissue preparation.
4. To determine to the strength of unknown sample by interpolation bioassay by using suitable tissue preparation
5. To determine to the strength of unknown sample by bracketing bioassay by using suitable tissue preparation
6. To determine to the strength of unknown sample by multiple point bioassay by using suitable tissue preparation.
7. Estimation of PA2 values of various antagonists using suitable isolated tissue preparations.
8. To study the effects of various drugs on isolated heart preparations
9. Recording of rat BP, heart rate and ECG.
10. Recording of rat ECG

PHARMACOLOGY PRACTICAL - IV
(MPL 205PB)

1. Drug absorption studies by averted rat ileum preparation.
2. Acute oral toxicity studies as per OECD guidelines.
3. Acute dermal toxicity studies as per OECD guidelines.
4. Repeated dose toxicity studies- Serum biochemical, haematological, urine analysis, functional observation tests and histological studies.
5. Drug mutagenicity study using mice bone-marrow chromosomal aberration test.
6. Protocol design for clinical trial.(3Nos.)
7. Design of ADR monitoring protocol.
8. In-silico docking studies. (2Nos.)
9. In-silico pharmacophore based screening.
10. In-silico QSAR studies.
11. ADR reporting.

REFERENCES

1. Fundamentals of experimental Pharmacology -by M.N. Ghosh
2. Handbook of Experimental Pharmacology- S.K. Kulakarni
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5. Applied Biopharmaceutics and Pharmacokinetics by Leon Shargel and Andrew B.C.Yu
6. Handbook of Essential Pharmacokinetics, Pharmacodynamics and Drug Metabolism for Industrial Scientists.

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SYNERGISTIC NOOTROPIC ACTIVITY OF ETHANOLIC LEAF EXTRACTS OF *ZIZIPHUS JUJUBA* AND *TINOSPORA CORDIFOLIA* AGAINST STRESS INDUCED RATS

Dissertation submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, KAKINADA

In the partial fulfillment of the requirements for the Award of the degree of

MASTER OF PHARMACY IN PHARMACOLOGY

Submitted by

VEERADURGALAKSHMI CHERAKANI

(Reg.No-213H1S0612)

Under the Guidance of

Dr. K. RAVI SHANKAR, M. Pharm, Ph. D

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CERTIFICATE

This is to certify that the investigation described in this thesis entitled Synergistic nootropic activity of ethanolic leaf extracts of *Ziziphus jujuba* and *Tinospora cordifolia* against stress induced rats was submitted by **Ch. Veeradurgalakshmi (Regd.No:213H1S0612)** of **Aditya College of Pharmacy (Affiliated to JNTU Kakinada)** for the partial fulfillment of Degree of Master of Pharmacy in the Department of Pharmacology. The Report embedded in this thesis was carried out under the Guidance of **Dr.K. Ravi Shankar, M. Pharm, Ph.D.**, Principal and professor of Aditya College of Pharmacy, Surampalem.

ADITYA COLLEGE OF PHARMACY SURAMPALEM

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PHARMACOLOGY PRACTICAL - I
(MPL 105PA)

1. Analysis of pharmacopoeial compounds and their formulations by UV Vis spectrophotometer
2. Simultaneous estimation of multi component containing formulations by UV spectrophotometry
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4. Experiments based on Gas Chromatography
5. Estimation of riboflavin/quinine sulphate by fluorimetry
6. Estimation of sodium/potassium by flame photometry handling of laboratory animals.
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8. Techniques of blood sampling, anesthesia and euthanasia of experimental animals.
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11. Evaluation of analgesic, anti-inflammatory, local anesthetic, mydriatic and mioticactivity.
12. Evaluation of diureticactivity.
13. Evaluation of antiulcer activity by pylorus ligation method.
14. Oral glucose tolerance test.

PHARMACOLOGY PRACTICAL - II
(MPL 105PB)

Handling of laboratory animals.

1. Isolation and identification of DNA from various sources (Bacteria, Cauliflower, onion, Goatliver).
2. Isolation of RNA from yeast
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9. DNA fragmentation assay by agarose gel electrophoresis.
10. DNA damage study by Comet assay.
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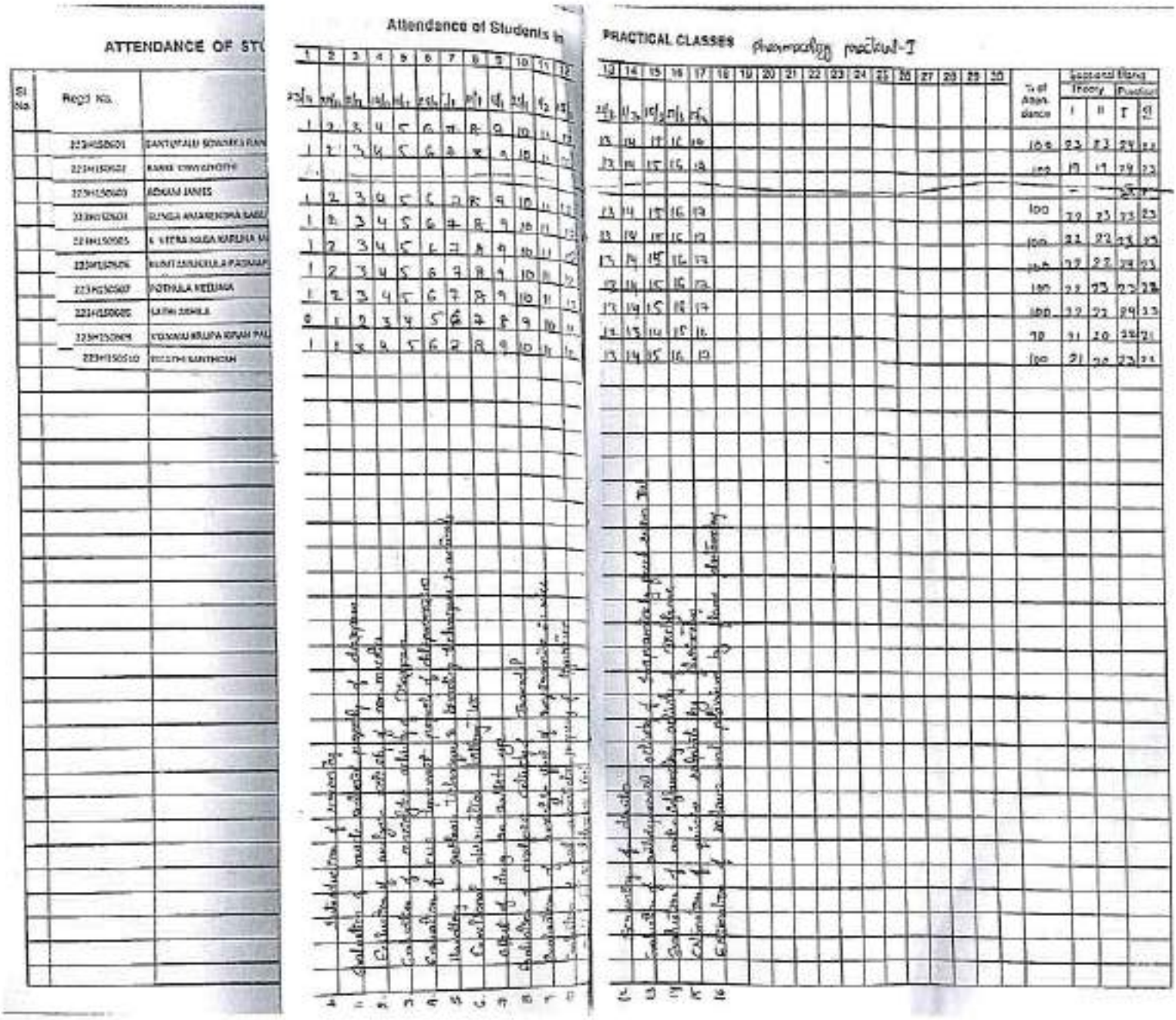
MPL 105PA PHARMACOLOGY-I PRACTICAL



ATTENDANCE OF STU

Sl No.	Regd No.	
	223H50501	SANTIPALLI SOWMYA RAN
	223H50502	RAMA VINYASHRUTHI
	223H50503	ARKAM JANIS
	223H50504	SUNGA ANANDKUMA BABU
	223H50505	K VEERA NAGA KARUNA M
	223H50506	KUNTI SRIKUSUMA PADMAP
	223H50507	POTHULA KEERTHI
	223H50508	LATHA SEMALA
	223H50509	YENNAM KRUPA KIRAN PAL
	223H50510	SUSITHA SANTHOSH

Attendance of Students in

PRACTICAL CLASSES Pharmacology practical-I

% of Attendance	Sessional Marks Theory I	Theory II	Practical I	Practical II
100	23	23	24	22
100	19	19	19	23
100	19	23	23	23
100	23	23	25	25
100	19	22	24	23
100	22	23	22	23
100	22	23	24	23
78	21	20	22	21
100	21	20	22	21

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PHARMACOLOGY PRACTICAL - III
(MPL 205PA)

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PHARMACOLOGY PRACTICAL - IV
(MPL 205PB)

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4. Repeated dose toxicity studies- Serum biochemical, haematological, urine analysis, functional observation tests and histological studies.
5. Drug mutagenicity study using mice bone-marrow chromosomal aberration test.
6. Protocol design for clinical trial.(3Nos.)
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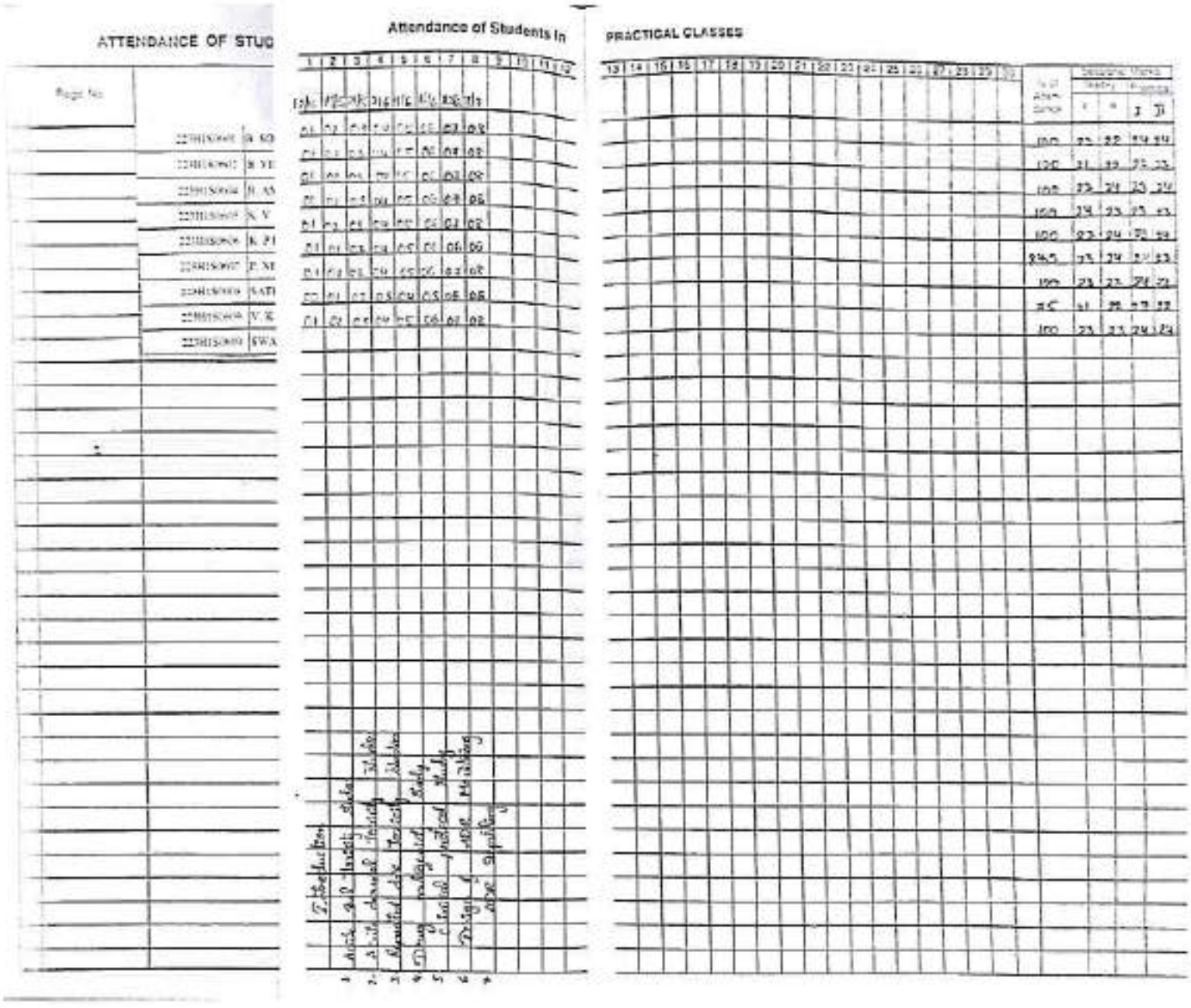
MPL 205PB PHARMACOLOGY PRACTICAL-IV



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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, semilogarthimic 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, Wilcoxan's signed rank test, Wilcoxan rank sum test, Mann Whitney U test, Kruskal-Wall is test (one way ANOVA)

d) Linear regression and correlation- Introduction, Pearsonn's and Spearmann'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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PROSPECTIVE OBSERVATIONAL STUDY ON PREVALENCE AND TREATMENT PATTERN OF HYPOTHYROIDISM DURING PREGNANCY

A Project report submitted to Jawaharlal Nehru technological University,

Kakinada

In partial fulfilment of the requirement of the award of degree of
DOCTOR OF PHARMACY

Submitted by

ALI NIHAL	Regd. No. 173H1T0001
ALLU TEJASWI	Regd. No. 183H1T0002
BARTHI MAHIMA ROJI	Regd. No. 183H1T0003
BODDU DEVIKA	Regd. No. 183H1T0005
DEVYANI	Regd. No. 183H1T0006

V Year Pharm.D (Doctor of Pharmacy)

Under the Guidance of

DR. PENUGONDA VINEELA, PHARM D
ASSISTANT PROFESSOR

DEPARTMENT OF PHARMACY PRACTICE
Aditya College OF PHARMACY
SURAMPALEM-533437

2022-23

INTERNAL EXAMINER

29/5/2023

EXTERNAL EXAMINER

ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM- 533 437

ADITYA
COLLEGE OF PHARMACY
Approved by AICTE & PCI - NEW DELHI, Affiliated to JNTUK KAKINADA
(Formerly known as Sri Sai Aditya Institute of Pharmaceutical Science & Research)
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Dr. K. Ravi Shankar, M.Pharm, Ph.D
Director & Principal

CERTIFICATE

This is to certify that the dissertation work entitled **PROSPECTIVE OBSERVATIONAL STUDY ON PREVALENCE AND TREATMENT PATTERN OF HYPOTHYROIDISM DURING PREGNANCY** is submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfilment for the award of degree of **Doctor of Pharmacy**. This is a bonafide work carried out by **Ali Nihal (Regd. No. 173H1T0001), Allu Tejaswi (Regd. No. 183H1T0002), Barthi Mahima Roji (Regd. No. 183H1T0003), Boddu Devika (Regd.No. 183H1T0005), Devyani (Regd. No. 183H1T0006)** under the guidance and supervision of **Dr. PENUGONDA VINEELA** Assistant professor, Aditya college of Pharmacy, Surampalem.

Date: 13/04/2023

Place: Surampalem

Dr. K. Ravi Shankar

Principal

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2.6 PHARMACOTHERAPEUTICS - I (THEORY)

Theory : 3 Hrs. /Week

1. **Scope of the Subject:** This course is designed to impart knowledge and skills necessary for contribution to quality use of medicines. Chapters dealt cover briefly pathophysiology and mostly therapeutics of various diseases. This will enable the student to understand the pathophysiology of common diseases and their management.

2. **Objectives:** At completion of this subject it is expected that students will be able to understand –
   a. the pathophysiology of selected disease states and the rationale for drug therapy;
   b. the therapeutic approach to management of these diseases;
   c. the controversies in drug therapy;
   d. the importance of preparation of individualised therapeutic plans based on diagnosis;
   e. needs to identify the patient-specific parameters relevant in initiating drug therapy, and monitoring therapy (including alternatives, time-course of clinical and laboratory indices of therapeutic response and adverse effects);
   f. describe the pathophysiology of selected disease states and explain the rationale for drug therapy;
   g. summarise the therapeutic approach to management of these diseases including reference to the latest available evidence;
   h. discuss the controversies in drug therapy;
   i. discuss the preparation of individualised therapeutic plans based on diagnosis; and
   j. identify the patient-specific parameters relevant in initiating drug therapy, and monitoring therapy (including alternatives, time-course of clinical and laboratory indices of therapeutic response and adverse effects).

Text Books

a. Clinical Pharmacy and Therapeutics - Roger and Walker, Churchill Livingstone publication.
b. Pharmacotherapy: A Pathophysiologic approach - Joseph T. Dipiro et al. Appleton & Lange.

Reference Books

a. Pathologic basis of disease - Robins SL, W.B.Saunders publication.
b. Pathology and therapeutics for Pharmacists: A Basis for Clinical Pharmacy Practice - Green and Harris, Chapman and Hall publication.
c. Clinical Pharmacy and Therapeutics - Eric T. Herfindal, Williams and Wilkins Publication.
d. Applied Therapeutics:The clinical Use of Drugs. Lloyd Young and Koda-Kimble MA
e. Avery's Drug Treatment, 4th Edn, 1997, Adis International Limited.
f. Relevant review articles from recent medical and pharmaceutical literature.

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.

Aditya College of Pharmacy
SURAMPALEM- 533 437

ROLES OF ANTIHYPERTENSIVE AND ANTIDIABETIC DRUG IN OUTCOME OF INTRACEREBRAL HEMORRHAGIC STROKE

A Project Report Submitted to Jawaharlal Nehru Technological University, Kakinada

In partial fulfillment of the requirements of the award of degree of

DOCTOR OF PHARMACY

SUBMITTED BY

KRISHNADEV SHAH	(Reg. No. 183H1T0008)
MAHIMA MOHAN	(Reg. No. 183H1T0011)
MUKESH KUMAR SAPHI	(Reg. No. 183H1T0013)
N. BHAVYA	(Reg. No. 183H1T0014)
RAJESH PUN	(Reg. No. 183H1T0015)

V[th] Year Pharm. D (Doctor of Pharmacy)

Under the Guidance of

Mr. AMIT KUMAR, M. Pharm, (Ph.D.)

Associate Professor

DEPARTMENT OF PHARMACY PRACTICE
ADITYA COLLEGE OF PHARMACY
SURAMPALEM - 533437

ANDHRA PRADESH

MAY 2023

INTERNAL EXAMINER

ADITYA COLLEGE OF PHARMACY SURAMPALEM

29/5/2023

EXTERNAL EXAMINER

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Dr. K. Ravi Shankar, M. Pharm, Ph.D.
Director & Principal

CERTIFICATE

This is to certify that the dissertation work entitled "**ROLES OF ANTIHYPERTENSIVE AND ANTIDIABETIC DRUG IN OUTCOME OF INTRACEREBRAL HEMORRHAGIC STROKE** is submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfillment for the award of degree of **Doctor of Pharmacy**. This bonafide work was carried out by **KRISHNADEV SHAH (Reg No. 183H1T0008), MAHIMA MOHAN (Reg No. 183H1T0011), MUKESH KUMAR SAPHI (Reg No. 183H1T0013), N. BHAVYA (Reg No. 183H1T0014) and RAJESH PUN (Reg No. 183H1T0015)** under the able guidance and supervision of **Mr. AMIT KUMAR**, Associate Professor, Department of Pharmacy Practice, Aditya College of Pharmacy, Surampalem.

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM-533 437

Date:

Place: Surampalem

Dr. K. Ravi Shankar
Principal

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SURAMPALEM-533 437

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)

- Amylodosis

4 **Cancer:** differences between benign and malignant tumors, Histological diagnosis of malignancy, invasions and metastasis, patterns of spread, disturbances of growth of cells, classification of tumors, general biology of tumors, spread of malignant tumors, etiology and pathogenesis of cancer.

5 Types of shock, mechanisms, stages and management

6 Biological effects of radiation

7 Environmental and nutritional diseases
   i) Air pollution and smoking- SO2,NO, NO2, and CO
   ii) Protein calorie malnutrition, vitamins, obesity, pathogenesis of starvation.

8 Pathophysiology of common diseases
   a. Parkinsonism
   b. Schizophrenia
   c. Depression and mania
   d. Hypertension,
   e. Stroke (ischaemic and hemorrhage)
   f. Angina, CCF, Atherosclerosis, Myocardial infarction
   g. Diabetes Mellitus
   h. Peptic ulcer and inflammatory bowel diseases
   i. Cirrhosis and Alcoholic liver diseases
   j. Acute and chronic renal failure
   k. Asthma and chronic obstructive airway diseases

9 Infectious diseases :
   Sexually transmitted diseases (HIV,Syphilis,Gonorrhea), Urinary tract infections, Pneumonia, Typhoid, Tuberculosis, Leprosy, Malaria Dysentery (bacterial and amoebic), Hepatitis- infective hepatitis.

4. Assignments :

Title of the Experiment

1 Chemical Mediators of inflammation
2 Drug Hypersensitivity
3 Cigarette smoking & its ill effects
4 Biological Effects of Radiation
5 Etiology and hazards of obesity
6 Complications of diabetes
7 Diagnosis of cancer
8 Disorders of vitamins
9 Methods in Pathology- Laboratory values of clinical significance
10 Pathophysiology of Dengue Hemorrhagic Fever (DHF)

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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FACTORS AFFECTING THE QUALITY OF LIFE IN PATIENTS WITH PULMONARY ARTERIAL HYPERTENSION IN A TERTIARY CARE HOSPITAL

Dissertation submitted to Jawaharlal Nehru Technological University, Kakinada

In partial fulfilment of the requirement for awarding the degree of

DOCTOR OF PHARMACY

SUBMITTED BY

RINTA VINCENT	REGD.No. 183H1T0017
SANTOSHI SALADI	REGD.No. 183H1T0018
SANJANA	REGD.No. 183H1T0019
SERU NAGA KIREETI	REGD.No. 183H1T0020
MUKESH GUPTA	REGD.No. 183H1T002I

V Year PharmD (Doctor of Pharmacy)

Under the Guidance of

Dr. ANJU K ABRAHAM (Pharm-D)

Assistant Professor

DEPARTMENT OF PHARMACY PRACTICE
Aditya College of Pharmacy
Surampalem-533437

2022-23

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by AICTE & PCI - NEW DELHI, Affiliated to JNTUK KAKINADA
own as Sri Sai Aditya Institute of Pharmaceutical Science & Research)
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Dr. K. Ravi Shankar, M. Pharm, Ph. D
Director & Principal

CERTIFICATE

This is to certify that the dissertation work entitled **FACTORS AFFECTING THE QUALITY OF LIFE IN PATIENTS WITH PULMONARY ARTERIAL HYPERTENSION IN A TERTIARY CARE HOSPITAL** was submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfilment for the award of degree of **Doctor of Pharmacy**. This is a bonafide work carried out by **Rinta Vincent (Reg.No.183H1T0017), Santoshi Saladi (Reg.No.183H1T0018), Sanjana (Reg.No.183H1T0019), Seru Naga Kireeti (Reg.No.183H1T0020), Mukesh Gupta (Reg.No.183H1T0021)** under the able guidance and supervision of **Dr. Anju K Abraham**, Assistant Professor, Department of Pharmacy Practice, Aditya College of Pharmacy, Surampalem.

Date:

Place: Surampalem

ADITYA COLLEGE OF PHARMACY SURAMPALEM

Dr. K. Ravi Shankar
Principal

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM- 533 437, E.G. Dt., A.P.

2.5 COMMUNITY PHARMACY (THEORY)

Theory : 2 Hrs. /Week

1. **Scope:** In the changing scenario of pharmacy practice in India, Community Pharmacists are expected to offer various pharmaceutical care services. In order to meet this demand, students will be learning various skills such as dispensing of drugs, responding to minor ailments by providing suitable safe medication, patient counselling, health screening services for improved patient care in the community set up.

2. **Objectives:** Upon completion of the course, the student shall be able to –
   a. know pharmaceutical care services;
   b. know the business and professional practice management skills in community pharmacies;
   c. do patient counselling & provide health screening services to public in community pharmacy;
   d. respond to minor ailments and provide appropriate medication;
   e. show empathy and sympathy to patients; and
   f. appreciate the concept of Rational drug therapy.

   Text Books:
   a. Health Education and Community Pharmacy by N.S.Parmar.
   b. WHO consultative group report.
   c. Drug store & Business management by Mohammed Ali & Jyoti.

   Reference books:
   a. Handbook of pharmacy – health care. Edt. Robin J Harman. The Pharmaceutical press.
   b. Comprehensive Pharmacy Review – Edt. Leon Shargel. Lippincott Williams & Wilkins.

   Special requirements:
   1. Either the college is having model community pharmacy (meeting the schedule N requirement) or sign MoU with at least 4-5 community pharmacies nearby to the college for training the students on dispensing and counselling activities.
   2. Special equipments like B.P apparatus, Glucometer, Peak flow meter, and apparatus for cholesterol estimation.

3. **Scheme of evaluation (80 Marks)**

1.	Synopsis	10
2.	Major Experiment (Counselling of patients with specific diseases – emphasis should be given on Counselling introduction, content, process and conclusion)	30
3.	Minor Experiment(Ability to measure B.P/ CBG / Lung function)	15
4.	Prescription Analysis (Analyzing the prescriptions for probable drug interaction and ability to tell the management)	15
5.	Viva – Voce	10

4. **Lecture wise programme :**

Topics

1 **Definition, scope, of community pharmacy**
Roles and responsibilities of Community pharmacist

2 **Community Pharmacy Management**
a) Selection of site, Space layout, and design
b) Staff, Materials- coding, stocking
c) Legal requirements
d) Maintenance of various registers
e) Use of Computers: Business and health care soft wares

3 **Prescriptions** – parts of prescription, legality & identification of medication related problems like drug interactions.

4 **Inventory control in community pharmacy**
Definition, various methods of Inventory Control
ABC, VED, EOQ, Lead time, safety stock

5 **Pharmaceutical care**
Definition and Principles of Pharmaceutical care.

6 **Patient counselling**
Definition, outcomes, various stages, barriers, Strategies to overcome barriers
Patient information leaflets- content, design, & layouts, advisory labels

7 **Patient medication adherence**
Definition, Factors affecting medication adherence, role of pharmacist in improving the adherence.

8 **Health screening services**
Definition, importance, methods for screening
Blood pressure/ blood sugar/ lung function and Cholesterol testing

9 **OTC Medication- Definition, OTC medication list & Counselling**

10 **Health Education**
WHO Definition of health, and health promotion, care for children, pregnant & breast feeding women, and geriatric patients.
Commonly occurring Communicable Diseases, causative agents,
Clinical presentations and prevention of communicable diseases – Tuberculosis, Hepatitis, Typhoid, Amoebiasis, Malaria, Leprosy,
Syphilis, Gonorrhea and AIDS
Balance diet, and treatment & prevention of deficiency disorders
Family planning – role of pharmacist

11 **Responding to symptoms of minor ailments**
Relevant pathophysiology, common drug therapy to,
Pain, GI disturbances (Nausea, Vomiting, Dyspepsia, diarrhea, constipation), Pyrexia, Opthalmic symptoms, worms infestations.

12 **Essential Drugs concept and Rational Drug Therapy**
Role of community pharmacist

13 **Code of ethics for community pharmacists**

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SOCIOECONOMIC AND CLINICAL FACTORS AFFECTING DRUG UTILIZATION AND ADHERENCE OF INHALER MEDICATIONS ON COPD PATIENTS IN A TERTIARY CARE HOSPITAL

A Project report submitted to Jawaharlal Nehru technological University,

Kakinada

In partial fulfilment of the requirement of the award of degree of
DOCTOR OF PHARMACY

SUBMITTED BY

SIJINA K S	Regd. No. 183H1T0022
SUBERNA BASNET	Regd. No. 183H1T0023
YALLA SAI VIJAYA DURGA	Regd. No. 183H1T0024
SUNNY KUMAR YADAV	Regd. No. 183H1T0026
SUBHI ADHIKARI	Regd. No. 183H1T0027

V Year Pharm. D (Doctor of Pharmacy)

Under the GUIDANCE of

AMIT KUMAR, M.Pharm,(Ph.D)
Associate Professor

DEPARTMENT OF PHARMACY PRACTICE

Aditya College of Pharmacy
SURAMPALEM-533437

2022-23

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Dr. K. Ravi Shankar, M. Pharm, Ph. D
Director & Principal

CERTIFICATE

This is to certify that the dissertation work entitled **"SOCIOECONOMIC AND CLINICAL FACTORS AFFECTING DRUG UTILIZATION AND ADHERENCE OF INHALER MEDICATIONS ON COPD PATIENTS IN A TERTIARY CARE HOSPITAL"** is submitted to the Jawaharlal Nehru Technological University, Kakinada in partial fulfilment for the award of degree of **Doctor of Pharmacy**. This is a bonafide work carried out by **Sijina K S (Reg.No.183H1T0022), Suberna Basnet (Reg.No.183H1T0023), Yalla Sai Vijaya Durga (Reg.No.183H1T0024), Sunny Kumar Yadav (Reg.No.183H1T0026), Subhi Adhikari (Reg.No.183H1T0027)** under the guidance and supervision of **Mr. AMIT KUMAR**, Associate professor, Department of pharmacy practice, Aditya College of Pharmacy, Surampalem.

Date: 10/04/2023

Place: Surampalem

Dr. K. Ravi Shankar

Principal

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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 gastroenemius sciatic nerve preparation.
14. To record simple summation curve using gastroenemius sciatic nerve preparation.
15. To record simple effect of temperature using gastroenemius sciatic nerve preparation.
16. To record simple effect of load & after load using gastroenemius sciatic nerve preparation.
17. To record simple fatigue curve using gastroenemius 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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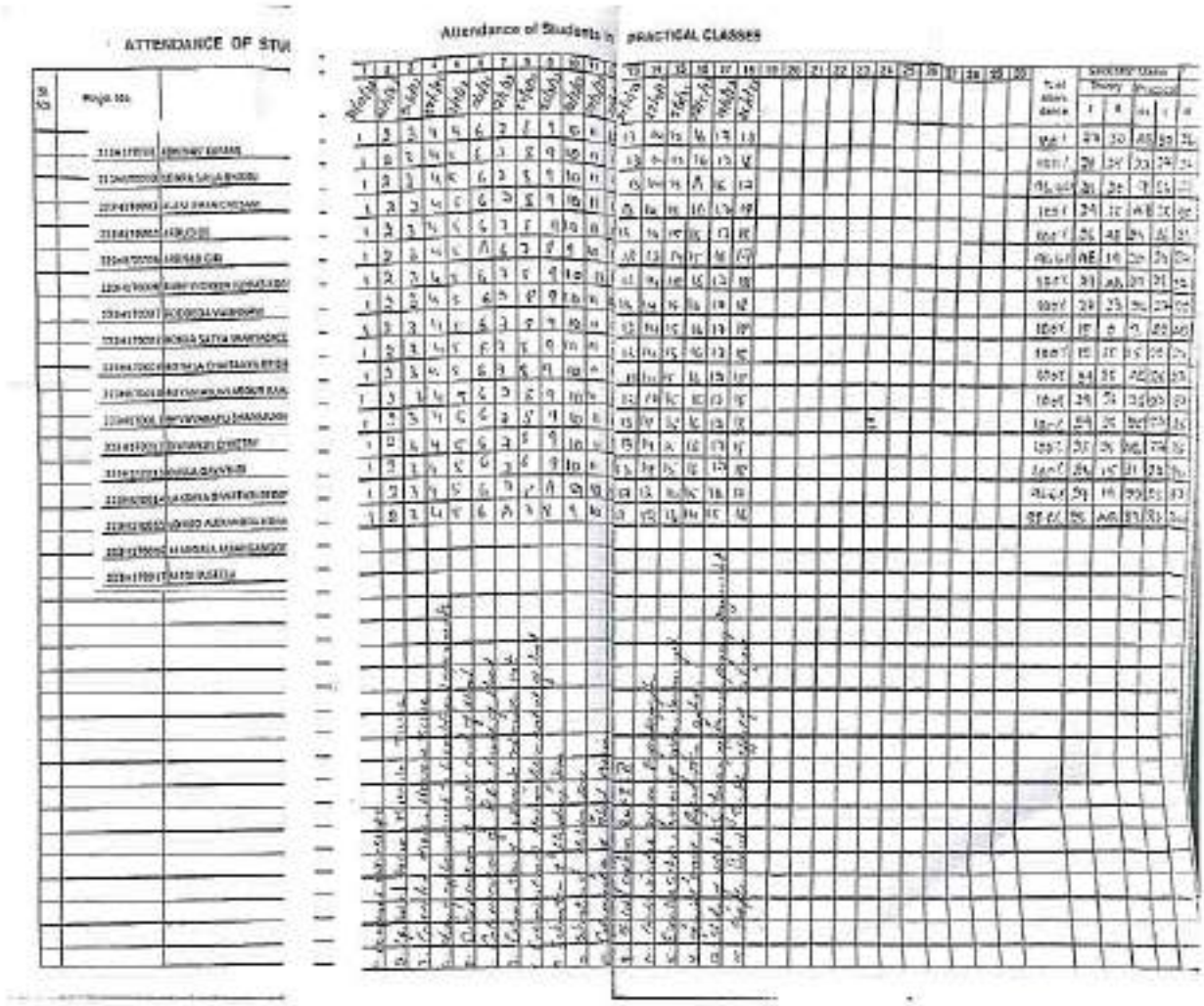
PD T10B HUMAN ANOTAMY AND PHYSIOLOGY PRACTICAL



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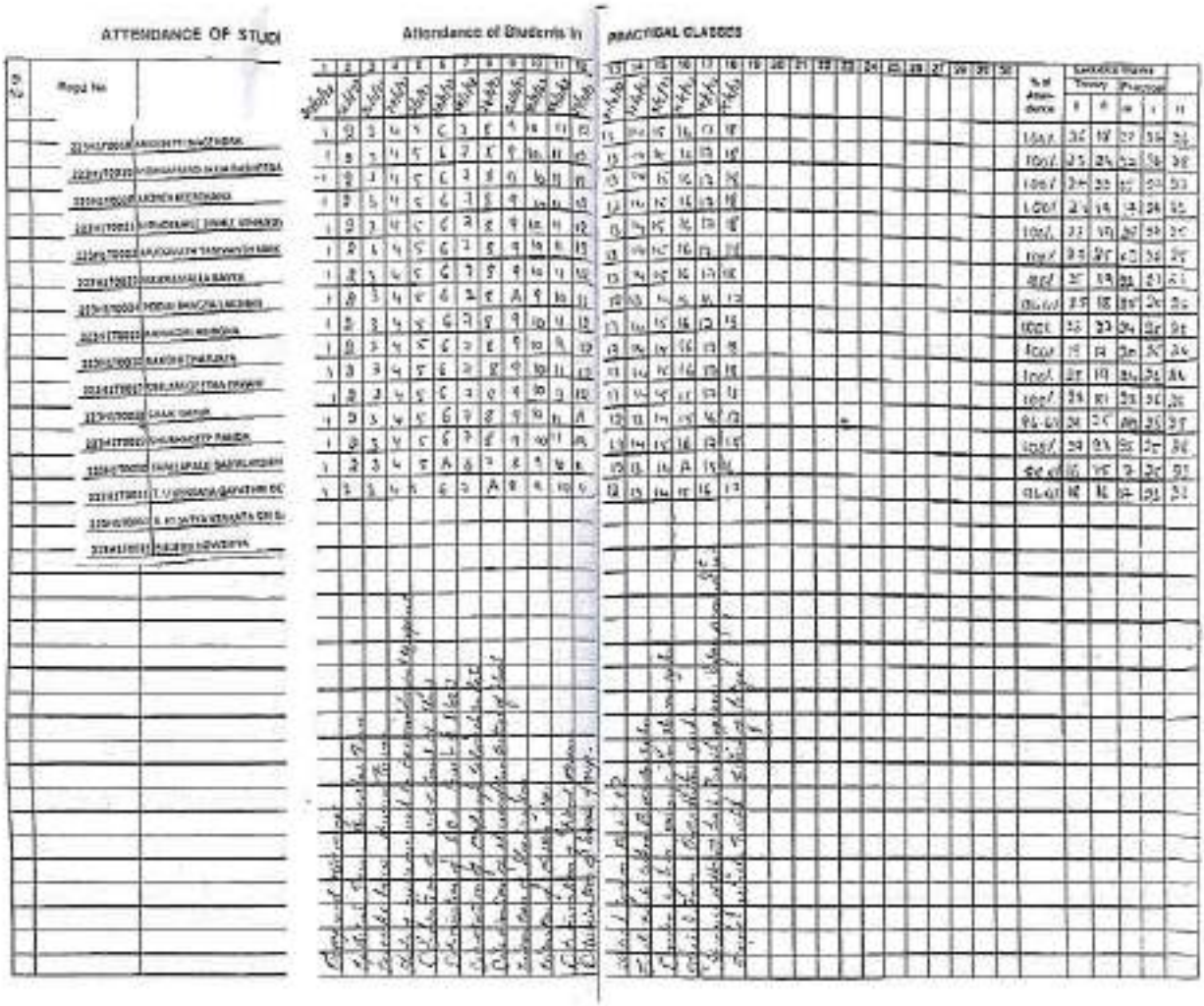

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7 Biphasic dosage forms: Suspensions and emulsions, Definition, advantages and disadvantages, classification, test for the type of emulsion, formulation, stability and evaluation.
8 Suppositories and pessaries: Definition, advantages and disadvantages, 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.

I.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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I PHARM-D PHARMACEUTICS

PRACTICAL

ATTENDANCE OF STUD

Attendance of Students in

PRACTICAL CLASSES

Sl. No.	Regd. No.	
	223H1T0008	VECHETTI NAGENDRA
	223H1T0009	MOHAMMAD UMAR KHALID
	223H1T0010	KADADI KUSTHANA
	223H1T0011	[illegible]
	223H1T0012	MUDAVATH YADAMATHI NAIK
	223H1T0013	[illegible]
	223H1T0014	PODILI BHAGYA LAKSHMI
	223H1T0015	[illegible]
	223H1T0016	RANDHI CHATURYA
	223H1T0017	SEELAM GEETHA PAVANI
	223H1T0018	SHAIK GAFUR
	223H1T0019	SHUBHADEEP PANDA
	223H1T0020	THALLAPALLI RAVIKUMARI
	223H1T0021	[illegible]
	223H1T0022	[illegible]
	223H1T0023	[illegible]

Sl. No.	% of Attendance	Sessional Marks Theory I	Theory II	Practical
1	78.7	26	24	28
2	91.5	28	29	30
3	93.5	28	28	28
4	95.7	28	30	29
5	95.7	29	30	28
6	72.7	28	26	26
7	95.7	29	28	28
8	93.5	26	28	28
9	89.1	28	30	30
10	95.7	28	29	28
11	91.3	28	15	24
12	95.7	27	29	28
13	91.3	29	29	29
14	91.3	29	28	29
15	93.5	29	29	29
16	91.3	29	28	29
17	89.1	29	28	29
18	91.3	30	28	30

ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM- 533 437

1

ATTENDANCE OF STUD

Attendance of Students in PRACTICAL CLASSES

Sl. No.	Regd. No.	
	223H170001	ABHINAV KUMAR
	223H170002	ADAPA LEELA BHANU
	223H170003	ALAM KHAN CHEGAM
	223H170004	ARJUN DE
	223H170005	ARNAB GIRI
	223H170006	BABY MEDISEN ARMAS KOPP
	223H170007	BOGGEDA VAISHNAVI
	223H170008	BOKKA SATYA SAIKRISHNA
	223H170009	BOYAKA DHANANJAYA KRISHNA
	223H170010	SUBRAMANIUM ADDUR BAHAM
	223H170011	BOYAPATI SAI KRISHNA MURTHY
	223H170012	CHAVADI CHETTY
	223H170013	DHULA GAYATHRI
	223H170014	JAKKAM GAYATHRI REDDY
	223H170015	JOYCE ALEXANDRA HOWDEN
	223H170016	MANDALA MANI GANGOTHRI
	223H170017	MEDI SUDEEKA

% of Attendance	Sessional Marks		
	Theory I	Theory II	Practical
97.1	19	16	29
91.5	23	20	24
96.5	25	16	28
72.9	26	20	26
90.1	24	22	27
95.3	20	17	30
70.1	18	16	25
91.5	23	22	25
94.3	15	10	24
97.9	24	15	29
50.3	15	08	29
95.7	18	19	28
77.9	20	22	26
94.3	18	26	28
90.1	19	22	28
74.3	21	13	29
77.5	25	25	26

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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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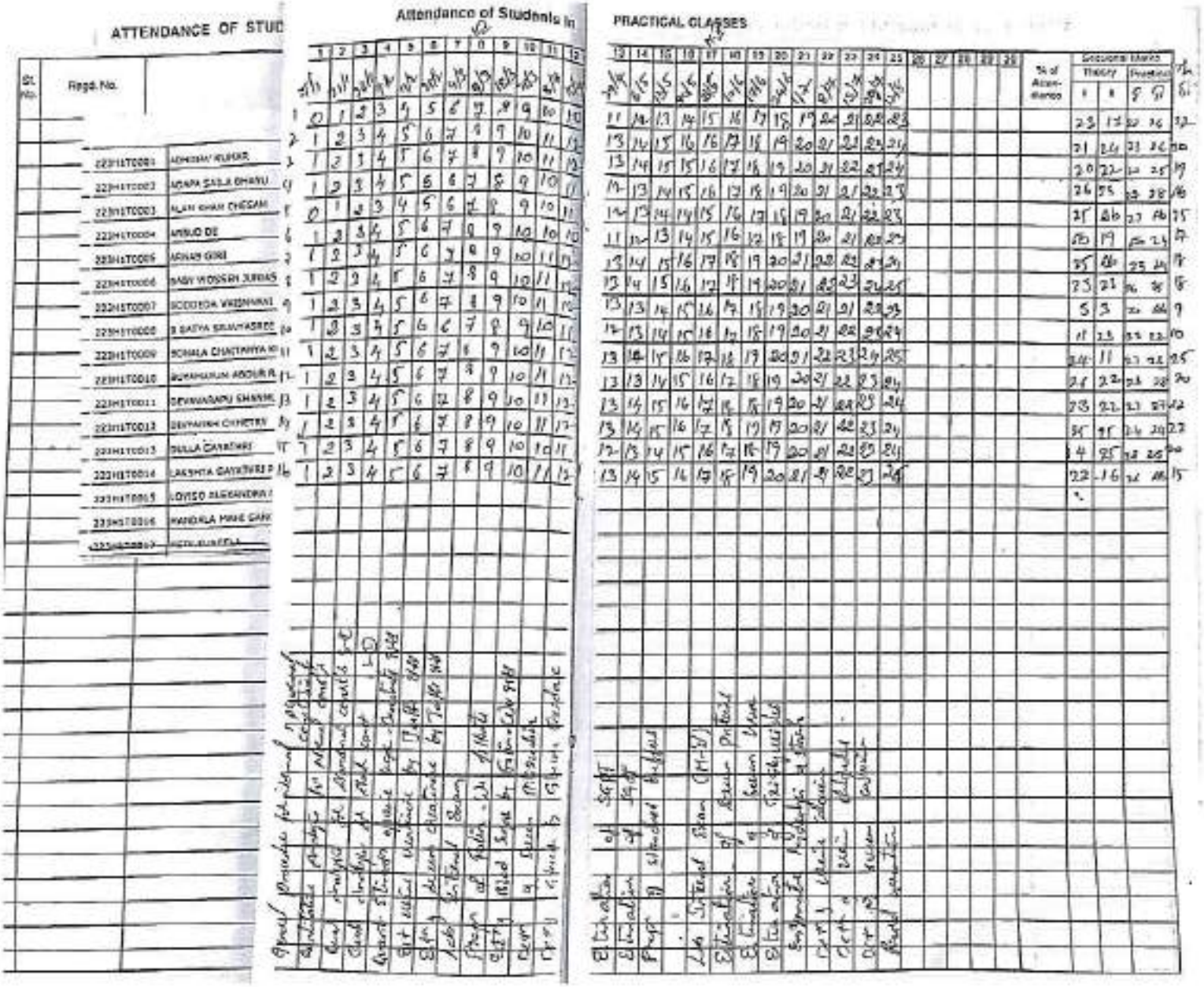
I PHARM-D MEDICINAL BIOCHEMISTRY

PRACTICAL



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ATTENDANCE OF STUD

Attendance of Students in

PRACTICAL CLASSES

Sl.No.	Regd. No.	
	223H1T0017	HIDI SUKEELA
	223H1T0018	HIDISETTI MAGE
	223H1T0019	MOHAMMAD JAKI
	223H1T0020	PIDIGI KEERTHA
	223H1T0021	POKKULURI ZANA
	223H1T0022	PUDIKANTH TASV
	223H1T0023	PUKKAPALLA KA
	223H1T0024	PODILI BHAGYA L
	223H1T0025	RAMAGIRI ABHID
	223H1T0026	SUNDHI CHATURI
	223H1T0027	SEELAM GEETHA I
	223H1T0028	SHAIK GAFUR
	223H1T0029	SHUBHADEEP PA
	223H1T0030	THALLAPALLI RA
	223H1T0031	T VEERA VENKATA
	223H1T0032	TI HI SATYA VENKA
	223H1T0033	DUDDTHI NOWSH

Sessional Marks			
Theory		Practical	
I	II	I	II
28	-	22	23
21	21	20	25
20	21	23	25
20	21	24	25
12	04	08	06
18	22	24	23
05	27	06	06
21	27	24	25
22	11	09	21
23	18	15	16
18	14	01	23
19	22	25	26
22	20	23	22
23	23	23	25
12	19	23	24
14	06	21	21
15	11	20	22

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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 dihyrate, 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. Acetanilde / 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-napthol (Diazotisation and coupling)
6. Benzoic acid / salicylic acid (Hydrolysis of ester)
7. M-dinitro benzene (Nitration)
8. 9, 10 – Antharaquinone (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-chlorotolune
14. Preparation of cyclohexanone from cyclohexanol

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II. Identification of organic compounds belonging to the following classes by :

Systematic qualitative organic analysis including preparation of derivatives Phenols, amides, carbohydrates, amines, carboxylic acids, aldehyde and ketones, Alcohols, esters, hydrocarbons, anilides, nitrocompounds.

III. Introduction to the use of stereo models:

Methane, Ethane, Ethylene, Acetylene, Cis alkene, Trans alkene, inversion of configuration.

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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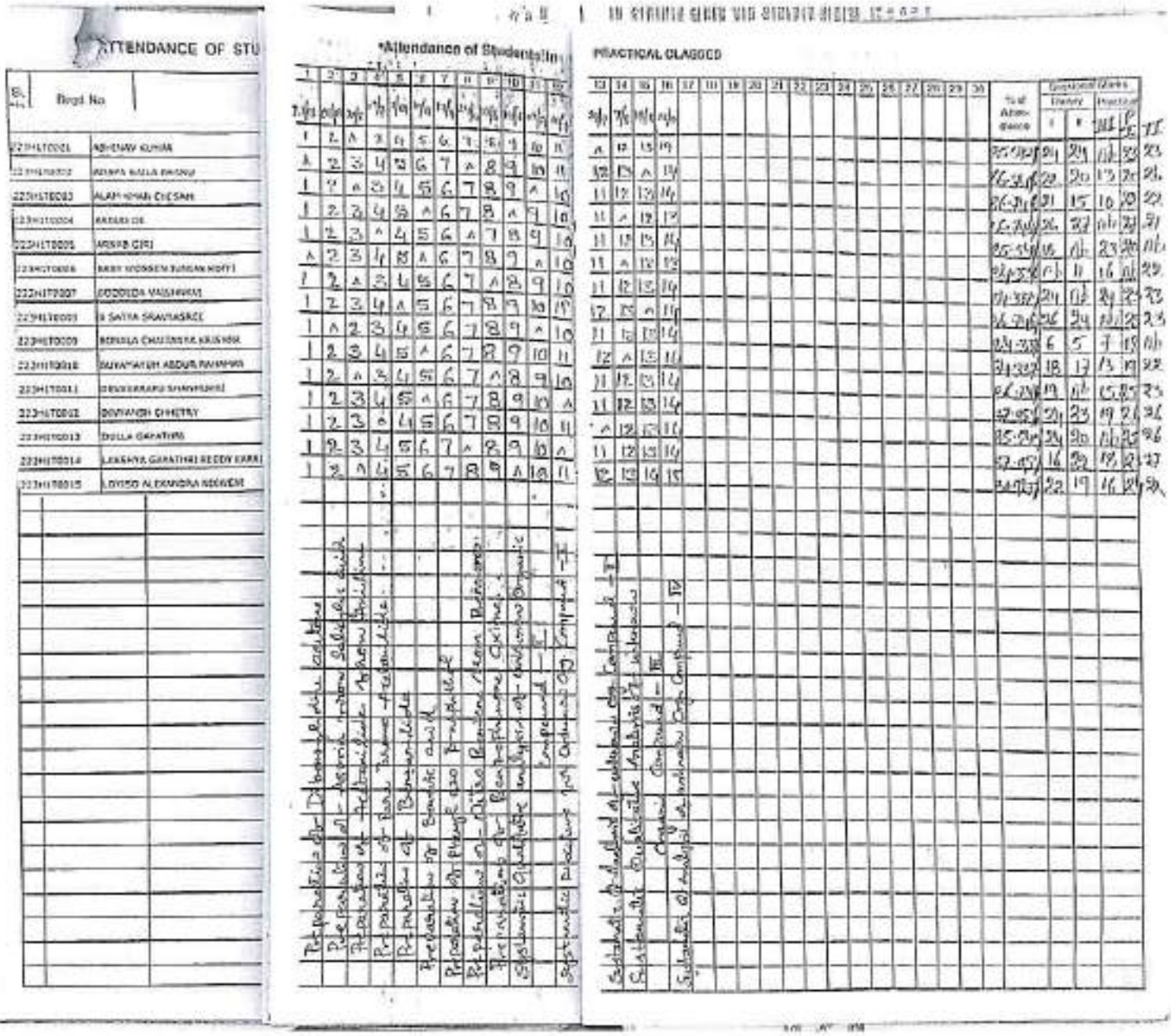
T11OB I PHARM-D PHARMACEUTICAL ORGANIC CHEMISTRY PRACTICAL



ATTENDANCE OF STU

S. No.	Regd No.	
	223H1T0001	ABHINAV KUMAR
	223H1T0002	ADAPA NALLA BHANU
	223H1T0003	ALAPATI HEMA CHESAN
	223H1T0004	BADARI DR
	223H1T0005	ARSHAD GIRI
	223H1T0006	BABU VISWESH SUNDAR MOPPI
	222H1T0007	DODDOLDA VAISHNAVI
	223H1T0008	G SATYA SRAVYASREE
	223H1T0009	BONGA CHAITANYA KRISHNA
	223H1T0010	SHAHAFATH ABDUR RAHMAN
	223H1T0011	DEVARAKONDA SHANMUKHI
	223H1T0012	DIVYANSH CHHETRY
	223H1T0013	DOLLA GAYATHRI
	223H1T0014	LEKKAPA GAYATHRI REDDY KARRI
	223H1T0015	LOYOLA ALEXANDRA NEKKENTI

*Attendance of Students in

PRACTICAL CLASSES

Total Attendance	Completed Classes: Theory I	Theory II	Practical I	Practical II
25-03-24	21	21	11	12
26-03-24	22	20	13	24
27-03-24	21	15	10	20
28-03-24	26	22	11	21
29-03-24	15	11	23	20
01-04-24	11	11	16	11
02-04-24	24	18	24	22
03-04-24	26	24	22	25
04-04-24	6	5	7	11
05-04-24	18	17	13	17
08-04-24	19	11	15	25
09-04-24	21	23	19	24
10-04-24	24	20	11	26
11-04-24	16	22	19	12
12-04-24	22	19	16	24

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ATTENDANCE OF STUDE

Sl. No.	Regd. No.	
	223H1T0016	MANDALA HARI GANGOTHRI
	223H1T0017	MEDI SUSEELA
	223H1T0018	MEDISETTI NARENDRA
	223H1T0019	MOHAMMAD JAVAD RASHEEDA
	223H1T0020	MOHOD KRISHNAVA
	223H1T0021	MOHOKHALE ZANKLE SITARDHA MAK
	223H1T0022	MUDAVATH YASWANTH NAIK
	223H1T0023	MUKKAMALLA KAVYA
	223H1T0024	PODILI BHAGYA LAKSHMI
	223H1T0025	RAMADORE KRISHNA
	223H1T0026	RAVOHI CHATURYA
	223H1T0027	SEELAM GEETHA PRANITI
	223H1T0028	SHAIK DAFUR
	223H1T0029	SHUBHAKDEEP PANDA
	223H1T0030	THALLAPALLI RATNALAKSHMI
	223H1T0031	TUPPALAK... S VEENA VENKATA DAY
	223H1T0032	RASHEDPAL MUTHYA KATYA VINYATA
	223H1T0033	BUDITHI MOKSHEYA

Attendance of Students in

PRACTICAL CLASSES

% of Attendance	Sessional Marks Theory I	Theory II	Practical I	Practical II	
83-13	24	17	18	23	22
84-14	18	Ab	Ab	18	21
84-22	18	14	25	19	23
85-24	23	20	Ab	19	24
81-09	26	21	18	20	25
86-24	22	14	15	18	23
85-54	24	19	27	18	21
84-36	26	25	26	25	26
80-22	22	17	Ab	21	24
84-32	15	12	21	19	Ab
86-24	22	17	18	20	24
85-54	17	3	Ab	18	Ab
85-54	18	19	20	19	22
84-35	23	20	22	21	24
82-46	24	23	Ab	22	24
85-64	25	20	Ab	23	23
84-36	20	Ab	17	20	Ab
82-32	19	10	08	19	23

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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 sulpahte- Iodometry
   d. Calciugluconate- 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 bicorbonate
   b. Barium sulphate
   c. Ferrous sulphate
   d. Potassium chloride

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5. **Test for purity (Any two exercises)**
   a. Swelling power in Bentonite
   b. Acid neutralising capacity in aluminium hydroxide gel
   c. Ammonium salts in potash alum
   d. Adsorption power heavy Kaolin
   e. Presence of Iodates in KI

6. **Preparations (Any two exercises)**
   a. Boric acids
   b. Potash alum
   c. Calcium lactate
   d. Magnesium suphate

Scheme of Practical Examination :

	Sessionals	**Annual**
Synopsis	05	15
Major Experiment	10	25
Minor Experiment1&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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I PHARM-D INORGANIC CHEMISTRY

PRACTICAL

ATTENDANCE OF STUDI

Sl No.	Regd. No.	
1	223H1T0001	ABHISHEK KUMAR
2	223H1T0002	ADAPA SAILA BHANU
3	223H1T0003	ALAM KHAN CHESAN
4	223H1T0004	ANJUD DE
5	223H1T0005	ARHAM GIRI
6	223H1T0006	BABY WOSSEN (UMAR KOFF)
7	223H1T0007	BOBBARDA VAISHNAVI
8	223H1T0008	B SATYA SRAVYASREE
9	223H1T0009	BORRA CHAITANYA KRISHNA
10	223H1T0010	BUPANAYUDI ABDUR RAHAMAN
11	223H1T0011	DEVAMARPU SHANMUKHI
12	223H1T0012	DIVYANSH CHISTRY
13	223H1T0013	DULLA GAYATHRI
14	223H1T0014	LAKSHYA GAYATHRI REDDY KURI
15	223H1T0015	LOYISO ALEXANDRA NDIWENI
16	223H1T0016	MANDALA NAVE GANGOTHRI
17	223H1T0017	MIDI SUSMITA
18	223H1T0018	MEDEBETTI MAHENDRA
19	223H1T0019	MOHAMMAD JAKIA NASHEEBA
20	223H1T0020	MONDI KSHATHIYA
21	223H1T0021	MPHEKGWLE ZINHLE STHANDWI
22	223H1T0022	MUDAVATH YASHWANTH NAIK
23	223H1T0023	MUKKAMALA KAVYA
24	223H1T0024	PODILI BHAGYA LAKSHMI
25	223H1T0025	RAMADIKI ADITISHA
26	223H1T0026	RANDHE CHATURYA
27	223H1T0027	SEELAM GEETHA PAVANI
28	223H1T0028	SHAIK GAFUR
29	223H1T0029	SHUBHADEEP PAHOA
30	223H1T0030	THALLAPALLI RAJYALAKSHMI
31	223H1T0031	TUMMALAPALLI VEERA VENKAT
32	223H1T0032	RAJAGOPAL MUTHYA SATYA VE
33	223H1T0033	MOHITHI NOWSHIYA

PRACTICAL CLASSES

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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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TIII I PHARM D REMEDIAL BIOLOGY

PRACTICAL

ATTENDANCE OF STUD

Attendance of Students in PRACTICAL CLASSES

Sl. No.	Regd. No.	
1	223H1T0001	ABHINAV KUMAR
2	223H1T0003	ALAM KHAN OFFSAM
3	223H1T0004	ARFAN BAI
4	223H1T0005	ASNAB (UR)
5	223H1T0006	BABY LOKSEN TO
6	223H1T0010	DURGAMBIKA AB
7	223H1T0015	JOYCE ALEXAN
8	223H1T0021	LAPHAKHUALE ZU
9	223H1T0029	SHUBHA DEEP

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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, Mantaux 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 B_2 and B_{12}. 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.

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 sterization 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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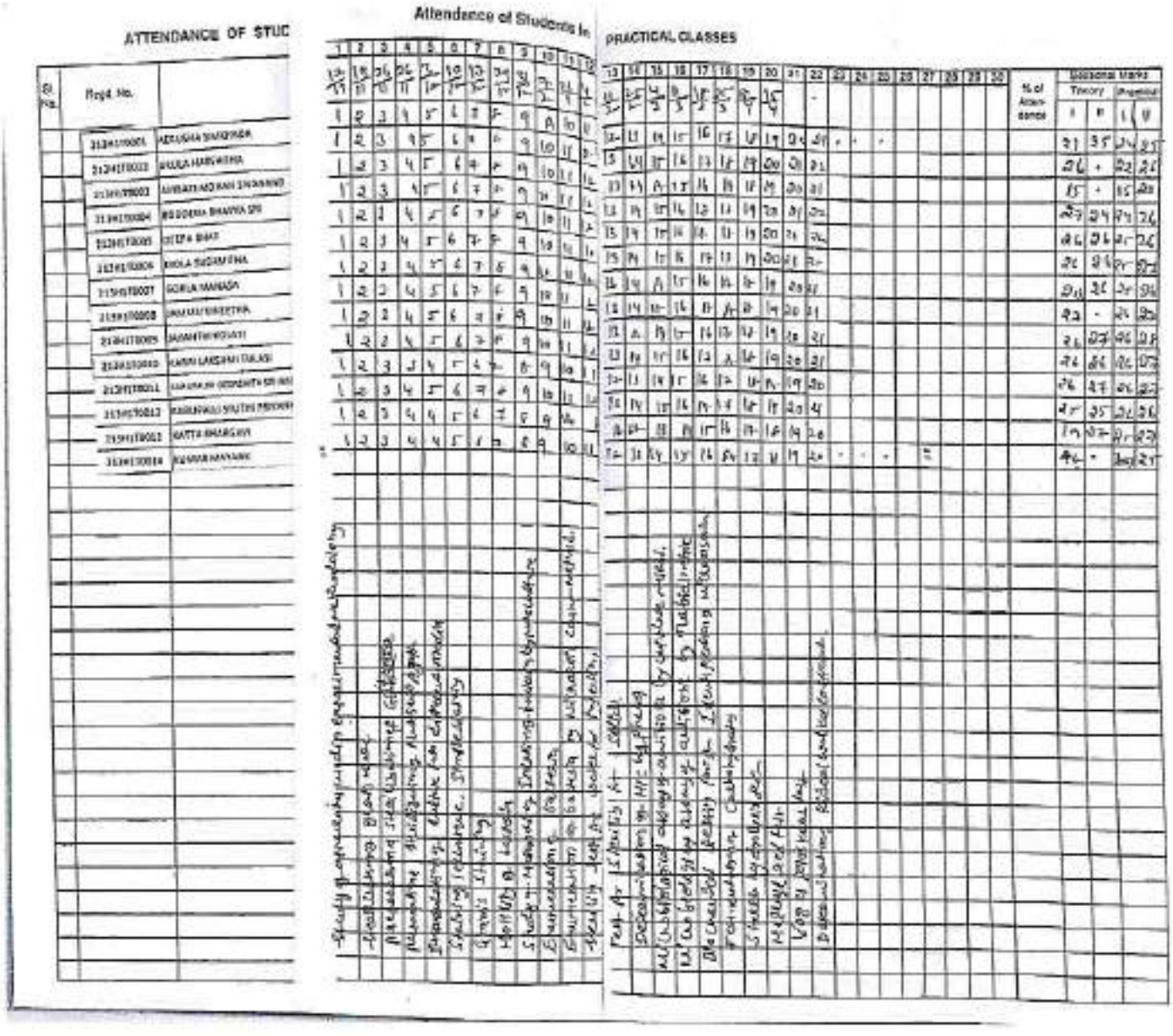
12107 II PHARM-D PHARMACEUTICAL MICROBIOLOGY

PRACTICAL



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.

ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM-533 437

T2108 II PHARM-D PHARMACOGNOSY AND PHYTOPHARMACEUTICALS

PRACTICAL

ATTENDANCE OF STU

Attendance of Students PRACTICAL CLASSES

Sl. No.	Regd. No.	
	213H170001	AENUSHA SANCHADA
	213H170002	ADULA HARSHITHA
	213H170003	AMBATI SUDHAN SIVAKANTH
	213H170004	BODDEDA BHAVYA SRI
	213H170005	DEEPA BHAT
	213H170006	DIDLA SUSHMITHA
	213H170007	GORLA UMAKAR
	213H170008	JANAPU VINEETHA
	213H170009	LAVANTHI BOLATI
	213H170010	KARRI LAKSHMI TULASI
	213H170011	KONDAVA BOOSHITA SRI HA
	213H170012	KARUPALLI SRUTHI PRIYA
	213H170013	KATTA BHARGAVI
	213H170014	KUMARI NEHARIKA

ADITYA COLLEGE OF PHARMACY SURAMPALEM

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Aditya College of Pharmacy
SURAMPALEM - 533 437

ATTENDANCE OF STUDEI

Attendance of Students in

PRACTICAL CLASSES

Sl No	Regd No	
	213H170015	PALIVELA JAYA KOWSHIK
	213H170016	PEDHAPUDI SHASHI KANTH
	213H170017	PRASANNA MEDAVARAPU
	213H170018	RAHUL CHAKRAVARTI
	213H170019	S V L SRI HARSHA SAGARAM
	213H170020	SEELAM HARSHITHA
	213H170021	SELLAMUTHU SELVAKUMARAN
	213H170022	SHEIK ANWAR BHASHA
	213H170023	SIDDI AISWARYA
	213H170024	TADI SOWMYA
	213H170026	TAPARA PAVANKALYAN
	213H170028	TANATIPWA SHALOM PARICHHIT
	213H170032	VEMPAREMI VIJAY VIKAS
	213H170028	PULAGALA SASI PRIYA

213H170015 Palivela Jaya Kowshik

% of Attendance	Sessional Marks			
	Theory		Practical	
	I	II	I	II
89.47	22	23	23	24
85.71	25	28	22	26
85.71	23	28	23	29
85.71	19	26	24	23
80.95	26	24	26	23
85.71	22	27	25	26
92.86	24	25	24	25
85.71	23	25	25	25
85.71	22	28	24	26
85.71	24	26	22	22
87.76	6	13	23	26
89.79	24	26	25	24
85.71	28	28	28	28
85.71	22	27	26	22
82.65	-	23	22	-

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SURAMPALEM- 533 437

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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- **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)

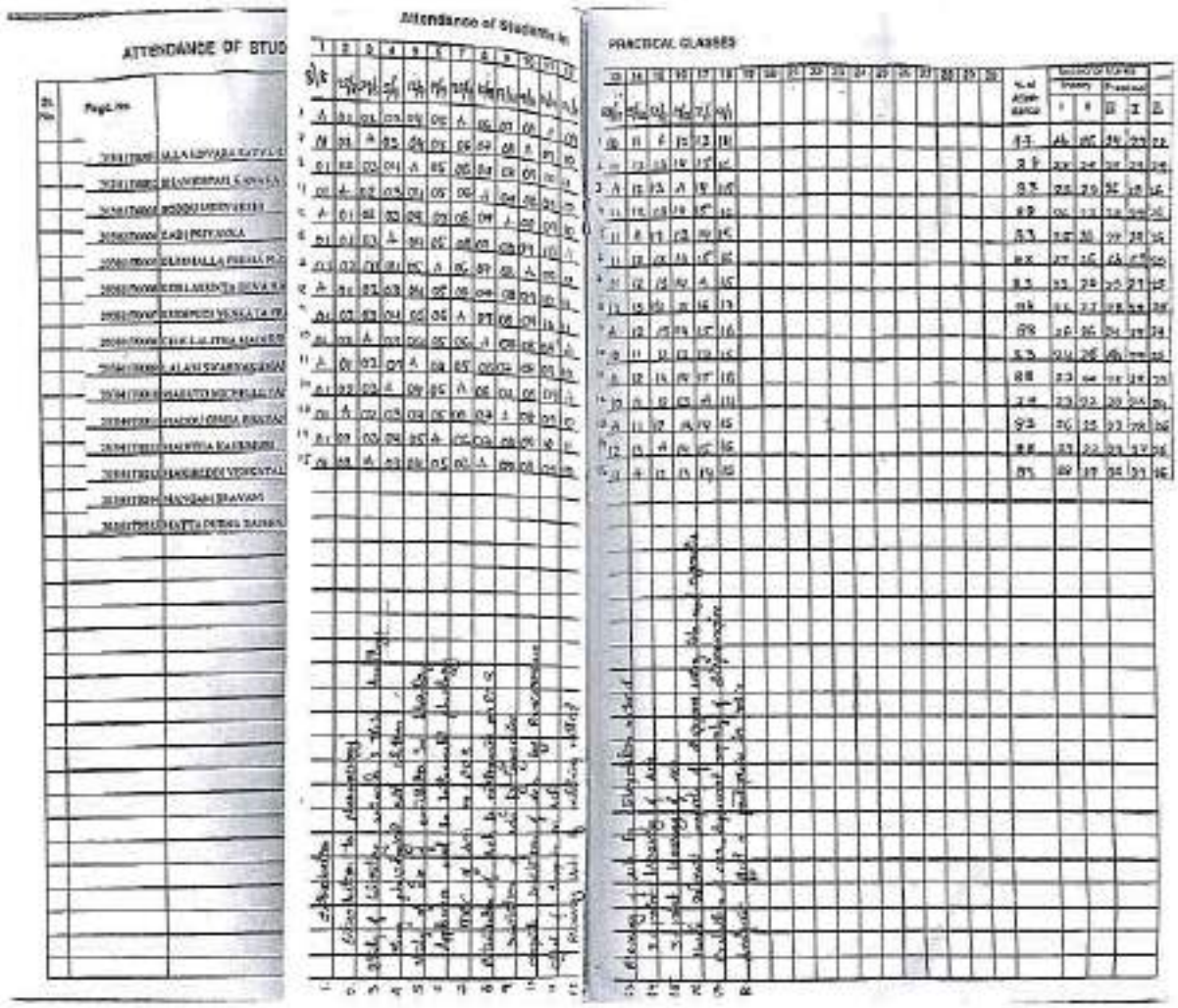
Practical : 3 Hrs./Week

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 a acid with a strong base.
8. Estimation of drugs by Fluorimetric technique.
9. Study of quenching effect in fluorimetry.
10. Colourimetric estimation of Supha drugs using BMR reagent.

T3107 III PHARMD PHARMACOLOGY – II

PRACTICAL



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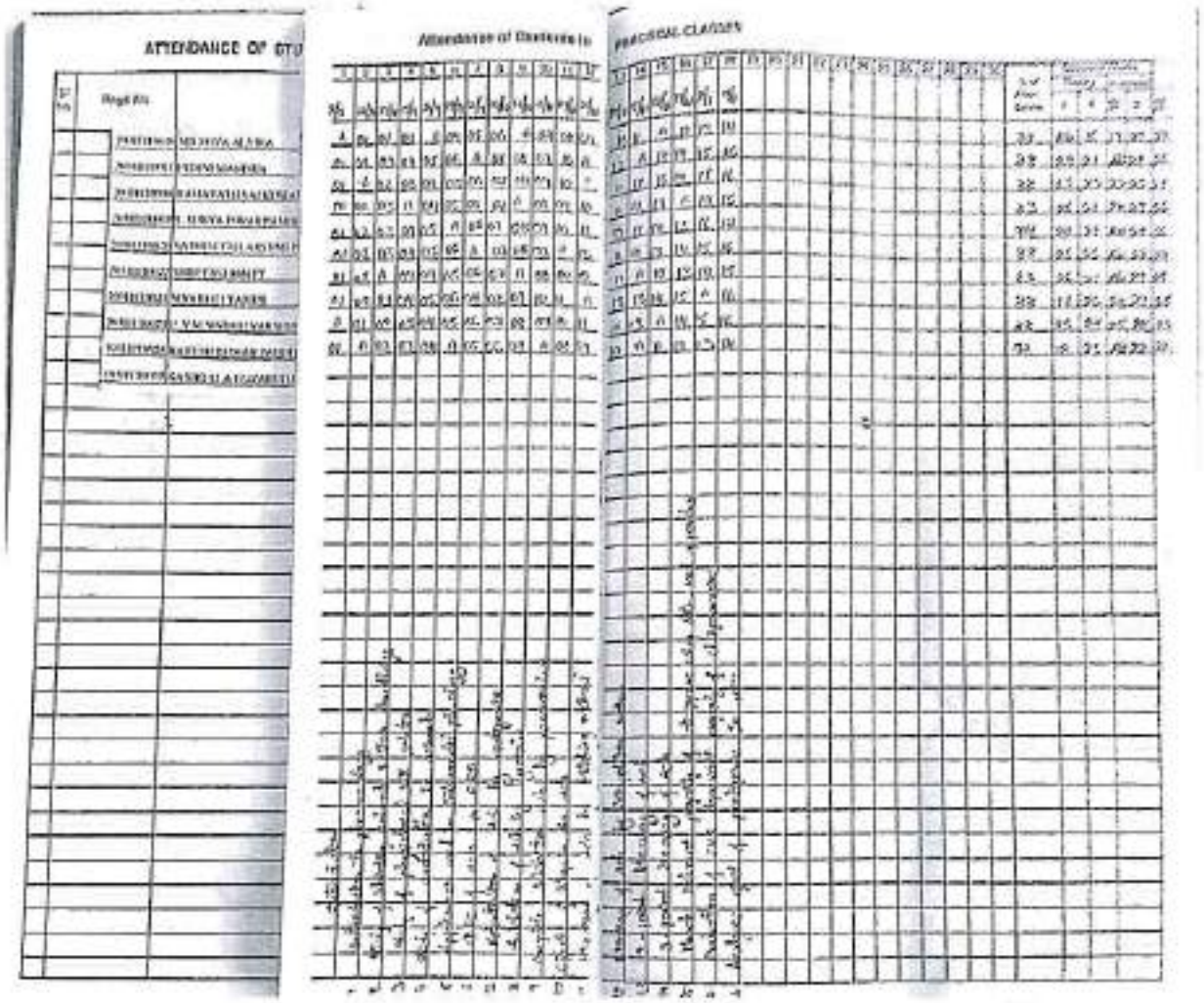
Aditya College of Pharmacy
SURAMPALEM- 533 437



ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM- 533 437

- **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 a acid with a strong base.
8. Estimation of drugs by Fluorimetric technique.
9. Study of quenching effect in fluorimetry.
10. Colourimetric estimation of Supha drugs using BMR reagent.

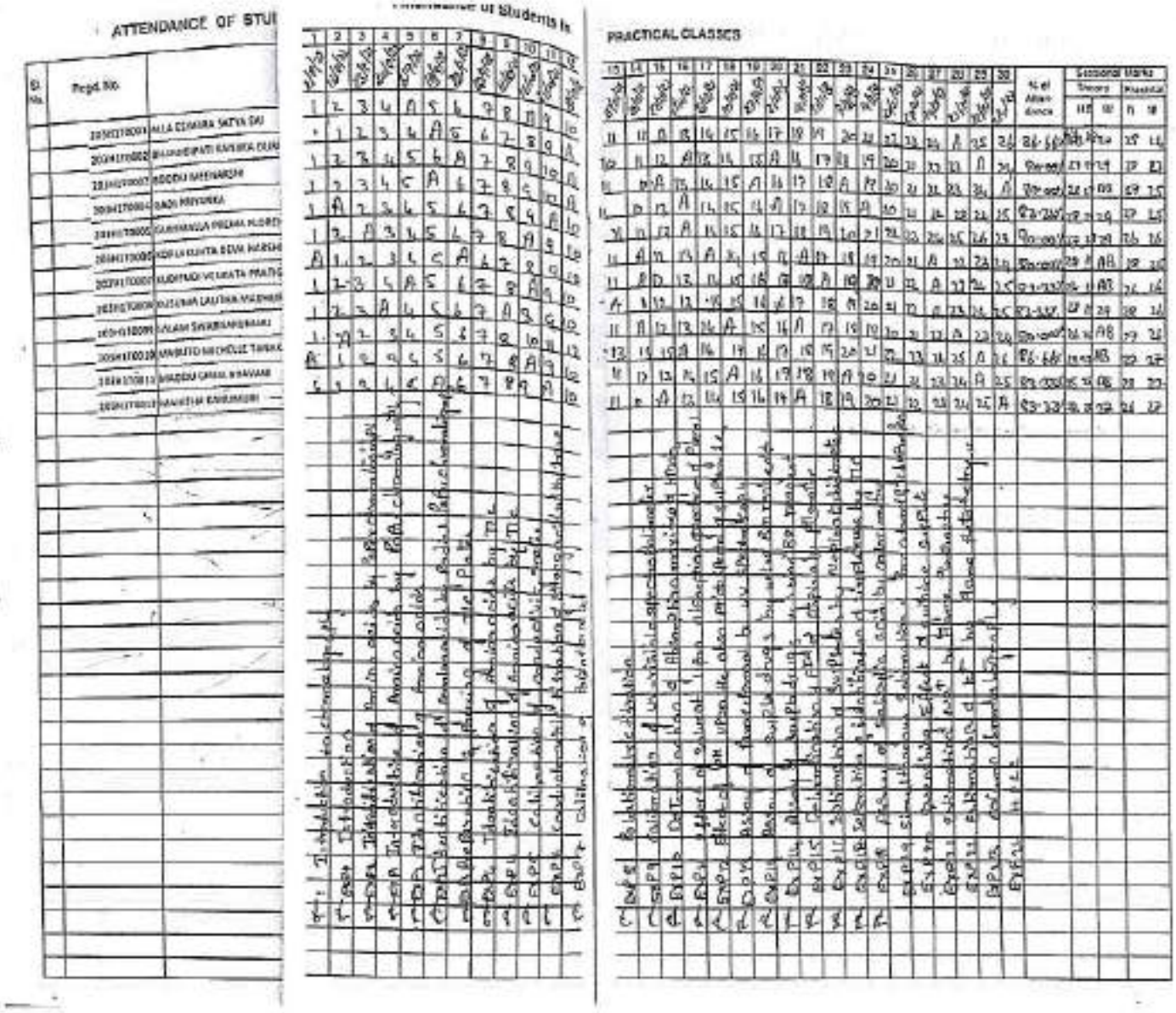
11. Simultaneous estimation of two drugs present in given formulation.
12. Assay of Salicylic Acid by colourimetry.
13. Determination of Chlorides and Sulphates in Calcium gluconate by Nepheloturbidimetric Method.
14. Determination of Na/K by Flame Photometry.
15. Determination of pKa using pH meter.
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.

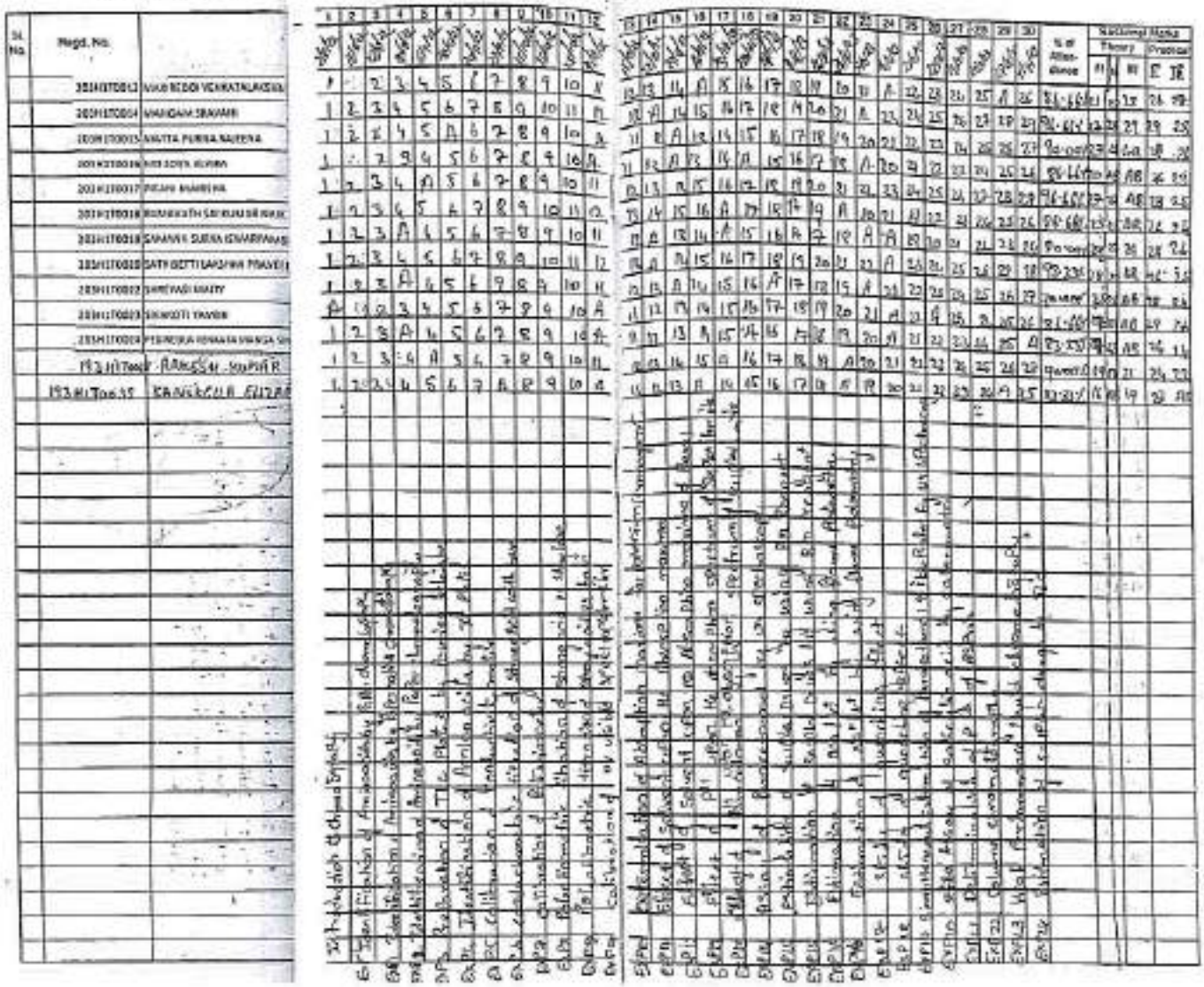
13108 III PHARM-D PHARMACEUTICAL ANALYSIS

PRACTICAL



ATTENDANCE OF STUD

Attendance of Students in PRACTICAL CLASSES



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).

3.3 PHARMACOTHERAPEUTICS – II (THEORY)

Theory : 3 Hrs. /Week

1. **Scope of the Subject:** This course is designed to impart knowledge and skills necessary for contribution to quality use of medicines. Chapters dealt cover briefly pathophysiology and mostly therapeutics of various diseases. This will enable the student to understand the pathophysiology of common diseases and their management.

2. **Objectives of the Subject Upon completion of the subject student shall be able to –**
   a. know the pathophysiology of selected disease states and the rationale for drug therapy
   b. know the therapeutic approach to management of these diseases;
   c. know the controversies in drug therapy;
   d. know the importance of preparation of individualised therapeutic plans based on diagnosis; and
   e. appreciate the needs to identify the patient-specific parameters relevant in initiating drug therapy, and monitoring therapy (including alternatives, time-course of clinical and laboratory indices of therapeutic response and adverse effects).

   Text books (Theory)
   Clinical Pharmacy and Therapeutics - Roger and Walker, Churchill Livingstone publication

   Reference books (Theory)
   a. Pharmacotherapy: A Pathophysiologic approach - Joseph T. Dipiro et al. Appleton & Lange
   b. Clinical Pharmacy and Therapeutics - Eric T. Herfindal, Williams and Wilkins Publication
   c. Applied Therapeutics: The clinical Use of Drugs. Lloyd Young and Koda-Kimble MA]

3. **Detailed syllabus and lecture wise schedule :**

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

   Title of the topic

   1. **Infectious disease:** Guidelines for the rational use of antibiotics and surgical Prophylaxis, Tuberculosis, Meningitis, Respiratory tract infections, Gastroenteritis, Endocarditis, Septicemia, Urinary tract infections, Protozoal infection- Malaria, HIV & Opportunistic infections, Fungal infections, Viral infections, Gonarrhoea and Syphillis
   2. **Musculoskeletal disorders**
      Rheumatoid arthritis, Osteoarthritis, Gout, Spondylitis, Systemic lupus erythematosus.
   3. **Renal system**
      Acute Renal Failure, Chronic Renal Failure, Renal Dialysis, Drug induced renal disorders

T3109 III PHARM-D PHARMACOTHERAPEUTICS – II

PRACTICAL

ATTENDANCE OF STUD

Attendance of Students in PRACTICAL CLASSES

Sl. No.	Regd. No.		% of Attendance	Sessional Marks Theory I	Theory II	Practical
	203H1T0003	VIJJA ESWARA SATYA SAI				
	203H1T0001	BHAVIDIPATI RAHAKA DURG				
	203H1T0009	BODDU VEENAKSHI				
	203H1T0004	DADI PRIYANKA				
	203H1T0005	GUNNAMALLA PREMA TUDEES				
	203H1T0006	KOLAGUNTA DEVA HARSHI				
	203H1T0007	KUDIPUDI VENKATA PRATEE				
	203H1T0008	KUNUKA LALITHA MADHURI				
	203H1T0010	LALAM SIVARAMAKRISHNA				
	203H1T0011	MARSETTI MICHELLE EMMA				
	203H1T0012	MADDU GANGA BHAVANI				
	203H1T0013	MAMIDIPALLI MANITHA				

ATTENDANCE OF STUD

Attendance of Students in PRACTICAL CLASSES

Sl. No.	Regd. No.		% of Attendance	Sessional Marks: Theory I	Theory II	Practical	
	203H1T0013	HARIDEDDI VENKATALAKSHMI	93.1/-	27	27	26	26
	203H1T0014	KAMIDANA SRAVANI	93.1/-	27	28	24	26
	203H1T0015	MATTA PURNA RAJESWA	91.1/-	28	27	29	28
	203H1T0016	MD ZOYA ALVIRA	93.1/-	25	26	26	26
	203H1T0017	PITANI MANISHA	82.1/-	23	23	26	24
	203H1T0018	RAMAVATH SAI KUMAR NAIK	94.1/-	24	26	29	26
	203H1T0019	SAMANA SURYA ISWARAMMA	91.1/-	25	28	28	27
	203H1T0020	SATHISETTI LAKSHMI PRAVEEN	91.1/-	26	23	24	24
	203H1T0021	SHRAVANI KAVITI	88.1/-	26	27	24	25
	203H1T0022	SWAMOTI RAVANI	88.1/-	25	27	26	26
	203H1T0024	YEDIDHUDLA VENKATA MANGA SAI	84.1/-	25	23	23	24

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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 Johnwilley 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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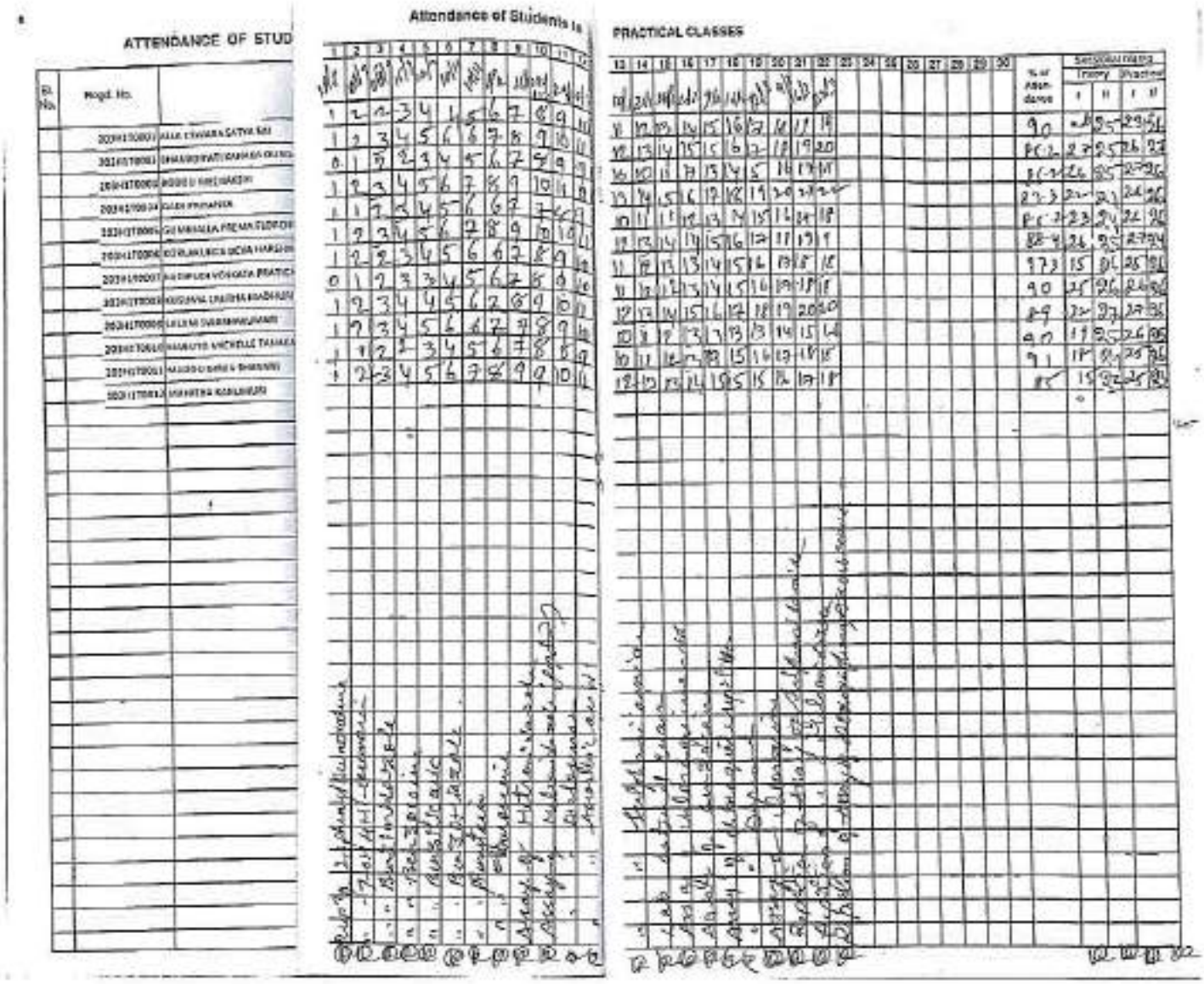
SURAMPALEM-533 437

T$_3$3110 III PHARM-D MEDICINAL CHEMISTRY

PRACTICAL

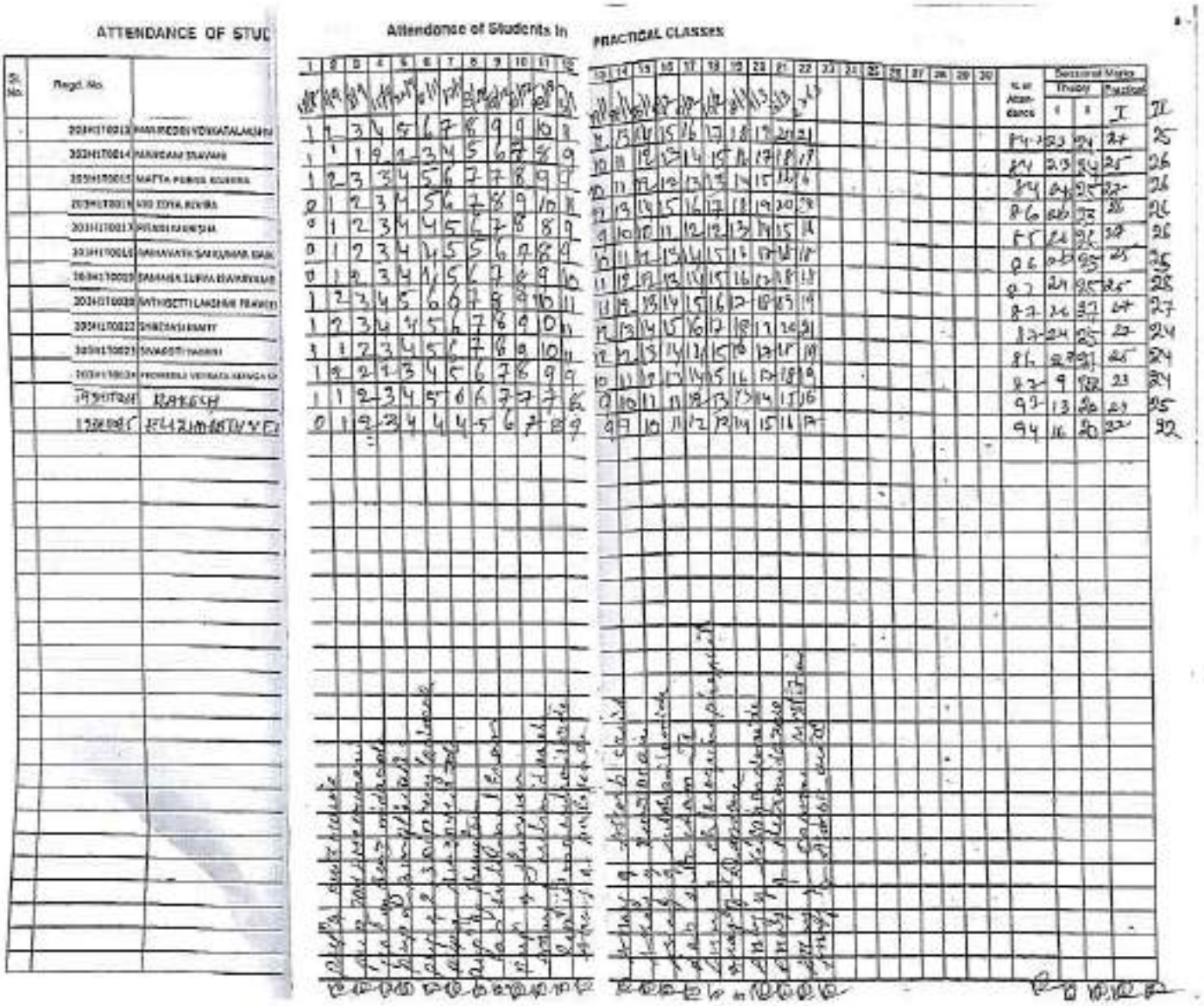


ADITYA COLLEGE OF PHARMACY SURAMPALEM

PRINCIPAL
Aditya College of Pharmacy
SURAMPALEM- 533 437

ATTENDANCE OF STUD

Attendance of Students in PRACTICAL CLASSES



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. Salicyclic 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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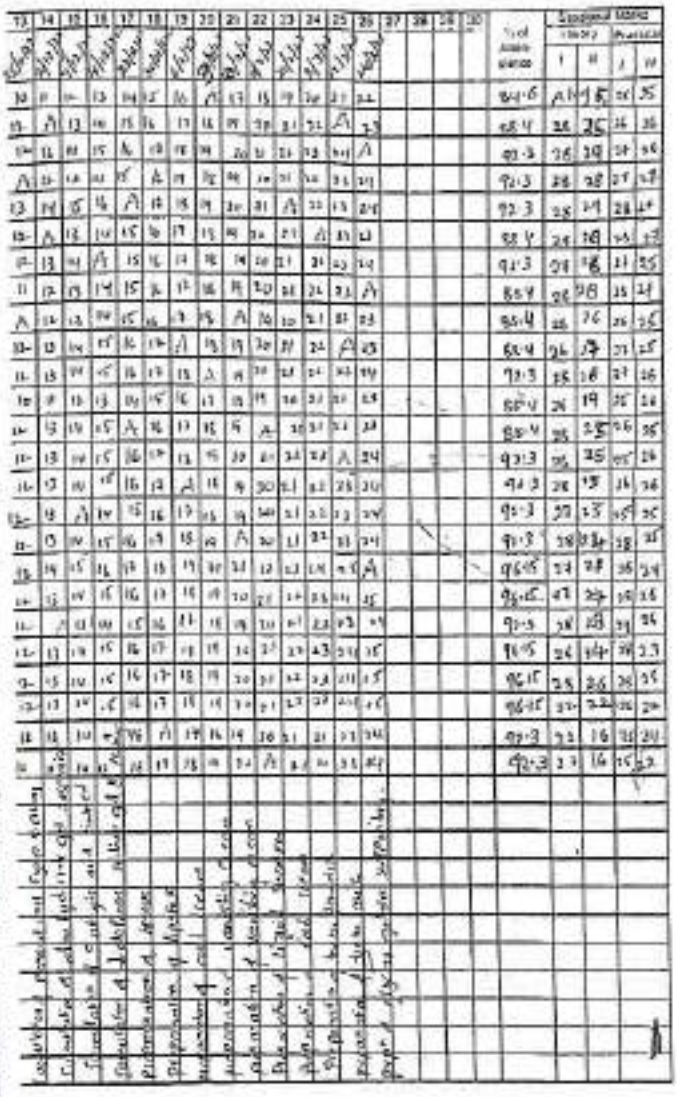
SURAMPALEM-533 437

T3111 III PHARM-D PHARMACEUTICAL FORMULATIONS PRACTICAL


ATTENDANCE OF STU


Attendance of Students in


PRACTICAL CLASSES

ATTENDANCE OF STUD

Attendance of Students in

PRACTICAL CLASSES

Sl. No.	Regd. No.	
	213H1T0015	PALIVELA JAYA LOSHNA
	213H1T0028	PEDAPUDI SRIKRITHI RAMYATHA
	213H1T0017	PRASANNA MEDARAMATI
	213H1T0018	RAHUL CHAUDHARY
	213H1T0019	S V L SRI PA RITHA SAGARANI
	213H1T0020	SEELAM MUNI MITHA
	213H1T0021	SOUMYOTTEJA RAMALINGAM
	213H1T0012	SHEIK ASHFAQ AHMAD
	213H1T0013	TADI MAHITHA
	213H1T0024	TADI SOBHYA
	213H1T0025	TATAPA PAVITRAVATHA
	213H1T0026	THANTEWA BHAGYA PARIMOHI
	213H1T0027	VIPPARTHI VENY VIKAS
	213H1T0028	YELAGALA SAGI PRIYA

Total Attendance	Sessional Marks			
	Theory		Practical	
	I	II	I	II

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).

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SURAMPALEM-533 437

T4107 IV PHARM-D PHARMACOTHERAPEUTICS - III

PRACTICAL

ATTENDANCE OF STUD

Sl. No.	Regd. No.	
	183H170010	MUHAMMADSHAFEEQ
	183H170001	ADAGALA GNANA LAKSHMI
	193H170002	ANGAM BABY SAI DURGA PA
	183H170003	BAJANTAM JAYA CHANDRA V
	183H170004	DODDY SAMBA
	183H170005	CHEEPURUPALLI BHAVYA D
	183H170006	GANGETI MADHAVI LAHARI
	183H170007	HAMMUSHI DILEEP KUMAR
	183H170008	KARRI HARIKA
	183H170009	KILARU KEARSH
	183H170010	KOYYURU KRANTHI KIRAN
	183H170011	MOLLETI VIJAYBAI KUMARI
	183H170012	NADIPALLI ANNE CHRISTEN
	183H170013	NEKKANTI KRISHNA SAITEJA
	183H170014	PARVIN SHEIKH
	183H170015	PRINCE BHARAT KUMAR
	183H170016	SUTONDO MOLLEEM MAUTS

Attendance of Students in PRACTICAL CLASSES

% of Attendance	Sessional Marks Theory I	Theory II	Practical
84-1/	20	22	28
93-1/	22	28	26
93-1/	22	24	24
92-1	24	26	28
92-1/	25	28	26
91-1	25	28	26
94-1	24	26	29
93-1	22	29	26
94-1	26	22-1	29
88-1	25	27-1	26
90-1	22	28	29
92-1	28	22	22
94-1	28	22-1	26
91-1	26	21-1	26
93-1	25	22-1	26
93-1	20	22	22
87-1	22	21-1	26

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ATTENDANCE OF STUD

Attendance of Students in

PRACTICAL CLASSES

Sl. No.	Regd. No.	
	193H1T00017	SAI VIJAYA KUMAR RAKURTHI
	193H1T00019	SASHINI SRI LAKSHMI
	193H1T00020	SHAIK REEBHA
	193H1T00021	SHAIK SAFIYA BEGHEBAN
	193H1T00022	SHIPANAM ZULU UVAMO
	193H1T00025	SURLA POOJITHA
	193H1T00026	UPPE RAJESH
	193H1T00027	VAPO HANMU GEETHIKA
	193M1T00036	VISWANADHAPALLI SAI SRISH
	193H1T00037	SHIGANI SHANMUGIRI
	193H1T00038	KARESH KUMAR PANDIT
	193H1T00039	AVINASH KUMAR SHAH
	193H1T00040	PEDDINTI LAKSHMI TANMAI
	193H1T00041	VELUGERI SHANTHI SHAROO
	193H1T00042	SATHVIKA PILLARI
	193H1T00043	SARVEPALLI V S S BANDARU
	193H1T00044	VANKADAVARTHI MALLIKARJU

% of Attendance	Sessional Marks	
	Theory	Practical
	I II	I II
91%	30 27	26 25
88%	23 28.5	29 23
93%	26 27.5	26 28
83%	26 23	21 27
96%	21 25.5	28 26
93%	23 28	21 26
89%	21 28.5	29 27
82%	26 28.5	29 28
92%	28 28	26 23
71%	26 23.5	24
91%	23 24.5	25 23
89%	29 27	26 27
89%	23 27	26 27
91%	23 27	21 24
88%	26 22	26 25

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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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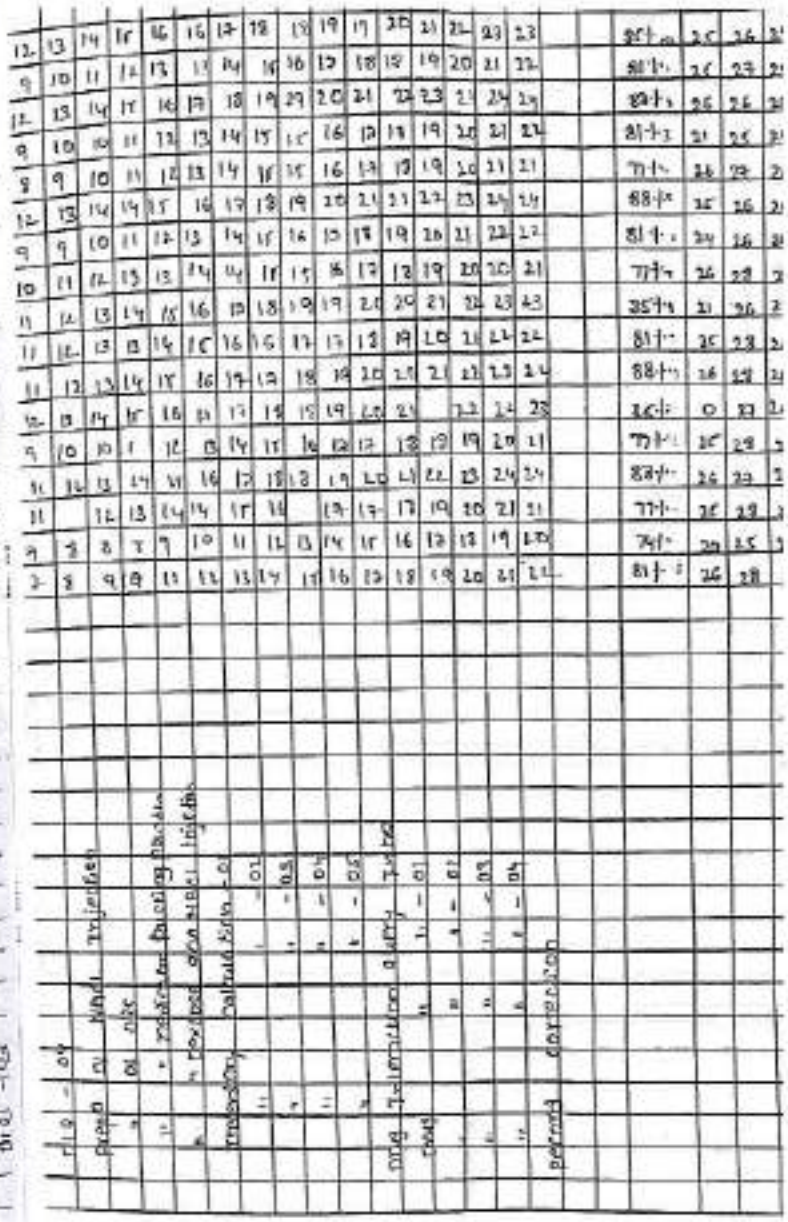
T4102 IV PHARM-D HOSPITAL PHARMACY

PRACTICAL

Regd. No.	
193H1T0010	AAIYE NAZIHATEED
193H1T0001	ADAGALA GNANA LAKSHM
193H1T0002	ANKAM BABY SAI DURGA
193H1T0003	BASHYAM JAYA CHANDRA
193H1T0004	BOBBA SAMBA
193H1T0005	CHEPURUPALLI BHAVYA
193H1T0006	DANGETI MOUJA LAHARI
193H1T0007	GUMPUDI DILEEP VARMA
193H1T0008	KARRI MARIKA
193H1T0009	KOLANGI ADARSH
193H1T0010	KOYYURU KRANTHI KIRAN
193H1T0011	MOULETI VIJAYRAJ KUMA
193H1T0012	NADIPALLI ABHIC CHRIST
193H1T0013	NOOKARTI KRISHNA MAHE
193H1T0014	PARASH HINDULA
193H1T0015	PRINCE KUMAR YADAV
193H1T0016	RUTENDO MOURIH MAVI



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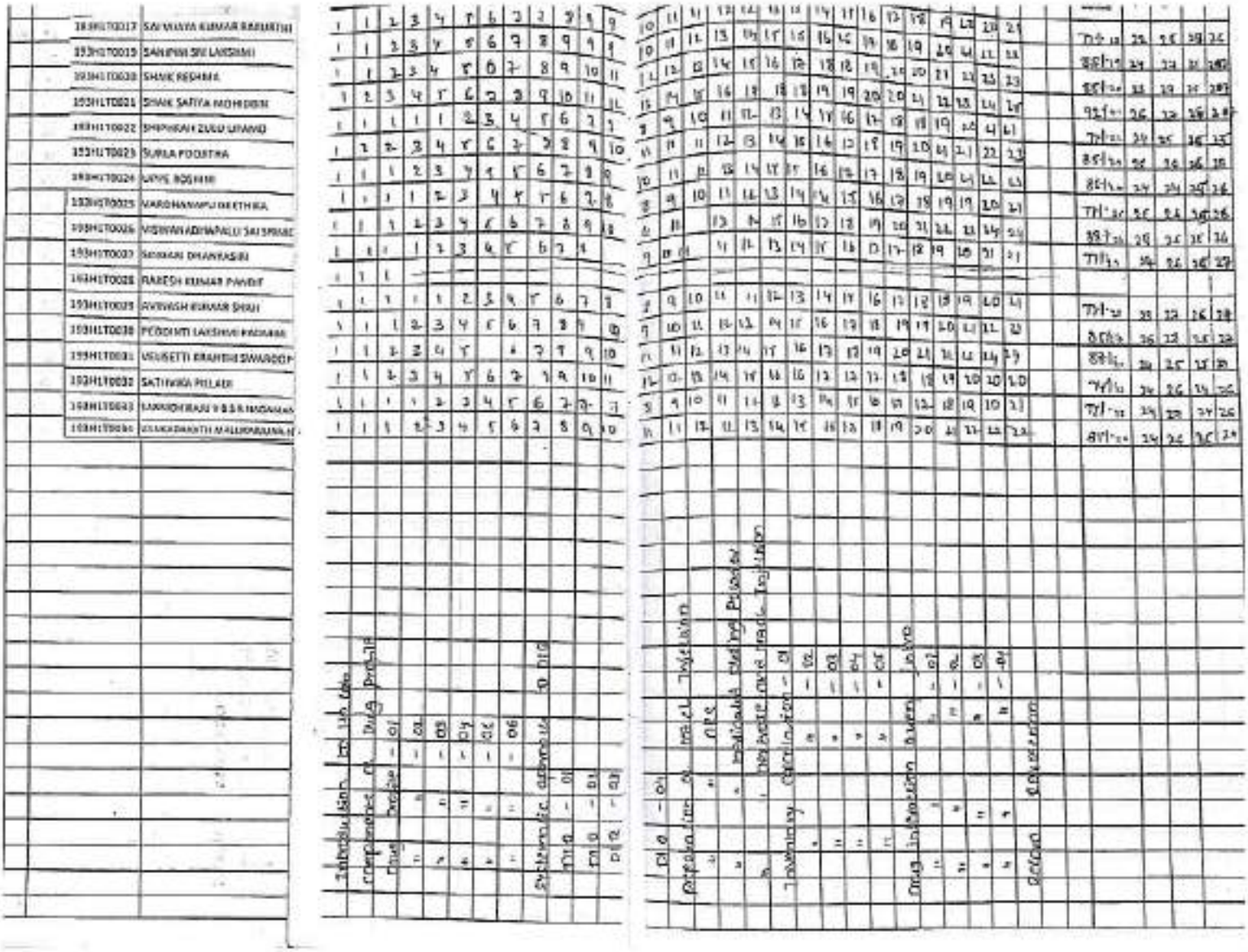

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3. **Patient data analysis**
   The patient's case history, its structure and use in evaluation of drug therapy & Understanding common medical abbreviations and terminologies used in clinical practices.
4. **Clinical laboratory tests used in the evaluation 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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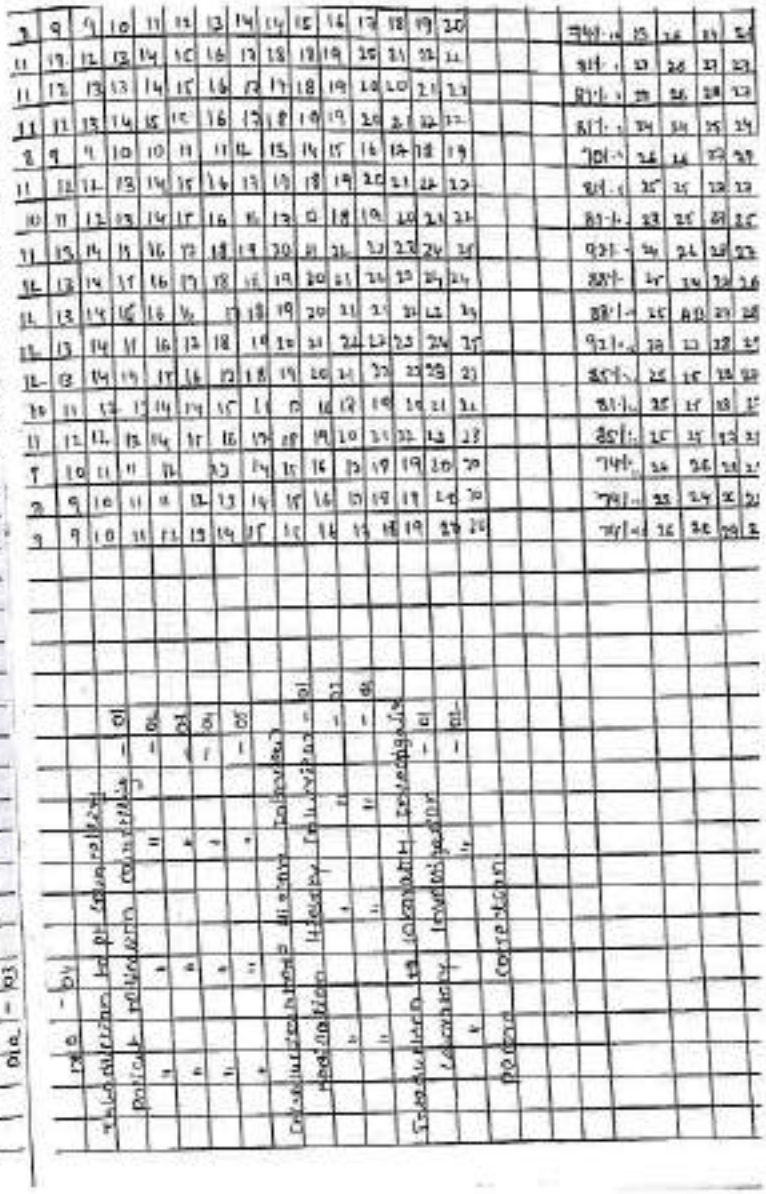
T4103 IV PHARM-D CLINICAL PHARMACY

PRACTICAL

193H1T0000	MANE MADHAVEEDI
193H1T0001	ADABALA DURGA LAKSHMI
193H1T0002	AMGAN BABY SAI DURGA P
193H1T0003	BAISWARI JAYA CHANDRA V
193H1T0004	BOBBY SAMBA
193H1T0005	CHEEPURUPALLI BHAVYA D
193H1T0006	DANDETI MOUNA SAIVANI
193H1T0007	INAMPUDI DILEEP VARMA
193H1T0008	KARRI HARIKA
193H1T0009	KELANGI ADARSH
193H1T0010	KOYYURU SRANTHI KIRAN
193H1T0011	MOLLERI VIJAYAJI KUMAR
193H1T0012	NADIPALLI ANNIE CHRISTIN
193H1T0013	NEERUMELLA VAISHNAVI RAKSHA
193H1T0014	PARIDAH HRIDULA
193H1T0015	PRINCE KUMAR YADAV
193H1T0016	RUTEMDO MOUERR PAUTH



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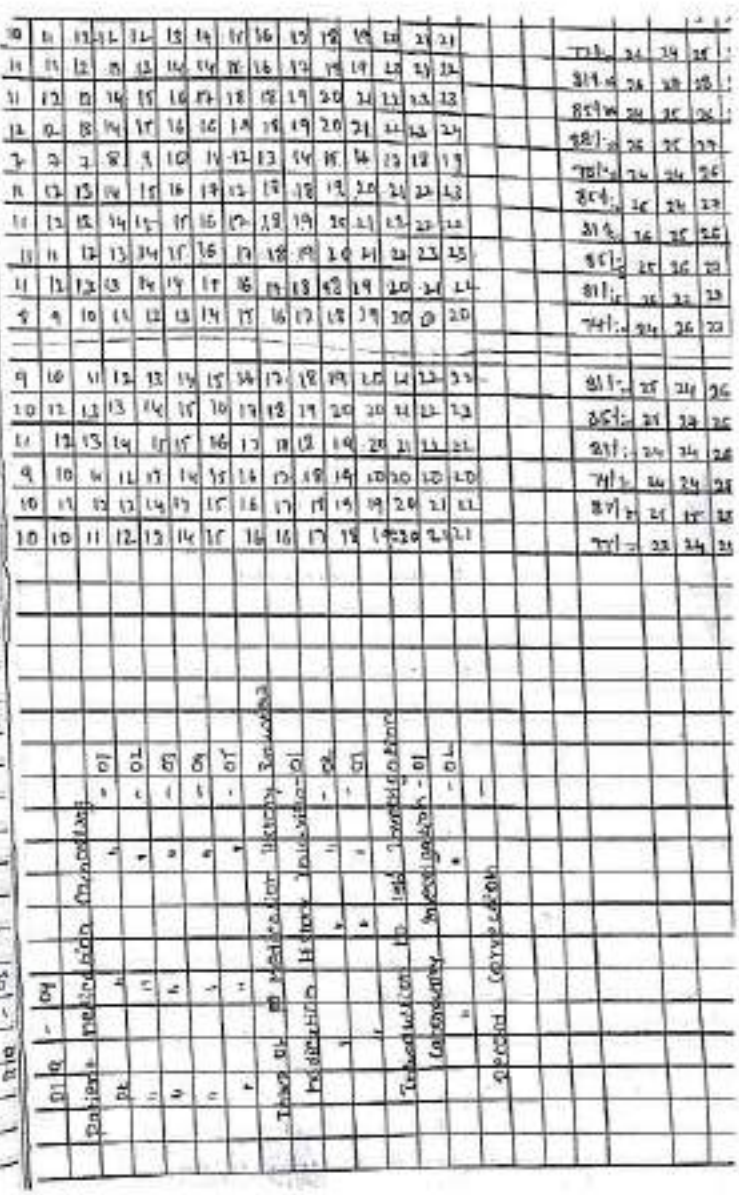
	193H1T0017	SAI VIJAYA KUMAR PAGUTHU
	193H1T0019	SAMPINI SRILAKSHMI
	193H1T0020	SHAIK RESHMA
	193H1T0021	SHAIK SAFIYA MOHIDDIN
	193H1T0022	SHIRISHA [illegible] UPPALA
	193H1T0023	SURLA POOJITHA
	193H1T0024	UPPE ROSHINI
	193H1T0025	VARDHANAPU GEETHIKA
	193H1T0026	VEDVANADHAPALLI SAI SRIVIC
	193H1T0027	VINGARI DHANYASRI
	193H1T0028	RAKESH KUMAR PANDIT
	193H1T0029	AVINASH KUMAR SHAW
	193H1T0030	PEDDINTI LAKSHMI PADMINI
	193H1T0031	VELISETTI KRANTHI SWAROOP
	193H1T0032	SATHVIKA PRLADI
	193H1T0033	DANNADHARAO V B S R NAGARAJU
	203H1T0034	VANKADARAVEDI MALLIKARJUN



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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 Ka, Ke, $t_1/2$, Cmax, 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, Sulphamethoxzole, 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:

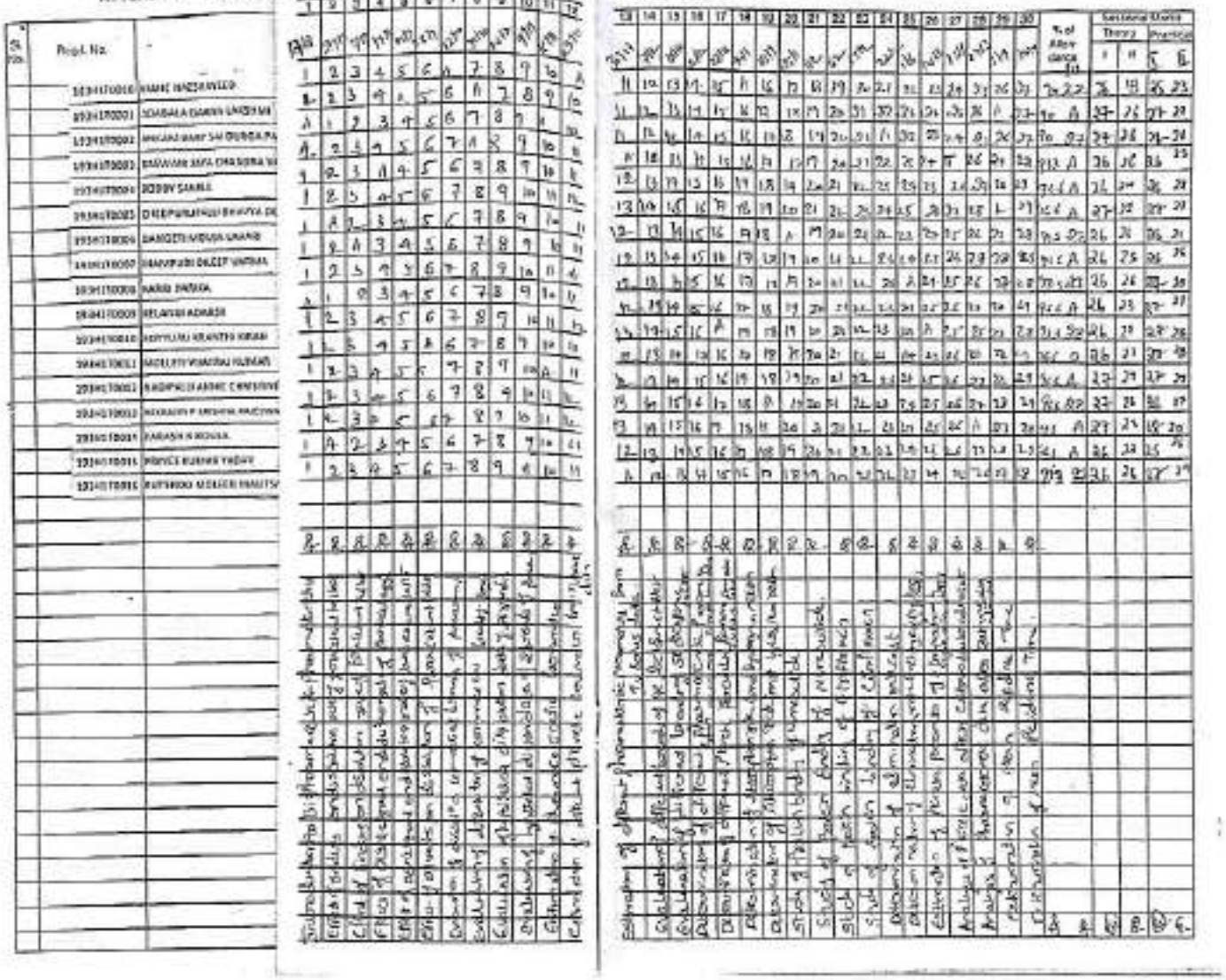
a. Biopharmaceutics and Clinical Pharmacokinetics by, Milo Gibaldi
b. Remington's Pharmaceutical Sciences, By Mack Publishing Company, Pennsylvnia.
c. Pharmacokinetics: By Milo Gibaldi Donald, R. Mercel Dekker Inc.
d. Hand Book of Clinical Pharmacokinetics, By Milo Gibaldi and Laurie Prescott by ADIS 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. Brahmankar and Sunil B.Jaiswal, Vallabh Prakashan Pitampura, Delhi
h. Cilincal 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 Rebort F Notari Marcel Dekker Inn, New York and Basel, 1987.
k. Encyclopedia of Pharmaceutical Technology, Vol 13, James Swarbrick, James, C. Roylan, Marcel Dekker Inc, New York 1996.

T4110 IV PHARM-D BIOPHARMACEUTICS AND PHARMACOKINETICS PRACTICAL

ATTENDANCE OF STUD

Attendance of Students in

PRACTICAL CLASSES



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SURAMPALEM

ATTENDANCE OF STUDI

Attendance of Students in PRACTICAL CLASSES

Sl. No.	Regd. No.	
	20241T0007	SAI VINAYA BABJAN RANGIREDDI
	20241T0009	SANDHYA SRI VAISHNAVI
	20241T0010	SHAIK ROSHANI
	20241T0015	SHAIK SAYNA SHAHEDDIN
	20241T0012	SHIVANJALI ZUKO UIKWO
	20241T0013	SIRISHA PODAPATI
	20241T0014	UPPE POOJITA
	20241T0015	VARDHANAPU GOUTHAMI
	20241T0016	VENNAVARAM PAVAN SAI SRINIVAS
	20241T0017	VINGARA SHANMUKHA
	20241T0018	RAKESH KUMAR PANDIT
	20241T0019	AVINASH KUMAR DAKE
	20241T0020	PEDDINTI LAKSHMI PADMAJA
	20241T0021	KOLUSOTTU [illegible] SWAROOP
	20241T0022	SATHVIKA PALADI
	20241T0023	[illegible]
	20241T0024	[illegible]

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