

B.Sc. II Year
SEMESTER-III
SUBJECT - PHARMACEUTICAL CHEMISTRY
PAPER - MEDICINAL CHEMISTRY-I

Max.Marks:85

Min. Marks:28

UNIT I

A)General Anaesthetics: Definition, Stages of Anaesthetics, Classification and Theories of General Anaesthetics.

Preparation, Mode of action, Therapeutic uses and Adverse Effects of Compounds- Thiopental Sodium, Halothane, Cyclopropane.

B)Local Anaesthetics: Definition, Classification and Site of action of Local Anaesthetics
Preparation, Mode of action, Therapeutic uses and Adverse Effects of Compounds- Procaine, Benzocaine, Lignocaine HCl, Dipiperdon HCl,

UNIT-II

A)Hypnotics and Sedatives: Definition, Classification and Structure Activity Relationship of barbiturates.

Preparation, Mode of action, Therapeutic uses and Adverse Effect of Compounds- Barbitone Sodium, Allobarbitone, Hexabarbitone, Glutethimide.

B) Tranquillizers and Anticonvulsants: Definition, Classification.

Preparation, Mode of action, Therapeutic use and adverse effect of Compounds- Chlorpromazine Hcl, Chlordiazepoxide, Diazepam.

UNIT-III

A)Adrenergic Agents: Classification, Adrenergic hormone, Structure Activity Relationship of Phenylethylamine analogs, Ephedrine, Pseudoephedrine HCl, Metarminol, Naphazoline HCl.

B)Antihypertensive: General Introduction, Causes and types of hypertension, Classification of Antihypertensives, Mode of action of Calcium-channel blockers.
Preparation, Mode of action, Therapeutic uses and Adverse effect of Compounds- Tolazoline Hcl, Propranolol HCl, Methyl dopa, Guanithidine sulphate, Captopril.

UNIT-IV

Non Steroidal Anti-Inflammatory Drugs : Definition, Types of Pain, Classification of NSAID, Structure Activity Relationship of Indole Acetic Acid derivatives & Salicylic acid derivatives.

Preparation, Mode of action, Therapeutic uses and Adverse effect of Compounds- Indomethacin, Tolmetin Sodium.

UNIT-V

Drugs Acting on Respiratory Systems

A)Expectorants and Antitussives: Classification and Mechanism of action, Potassium guaiacosulphonate , Terpene hydrate, Noscaphine.

B)Antiasthmatics Drugs : Classification, Causes of Asthma.

Preparation, Mode of action, Therapeutic uses and Adverse Effect of Compounds- Salbutamol, Terbutaline.

BOOKS RECOMMENDED

1. Ashutosh Kar, Medicinal Chemistry, New Age International (P) Limited. Publishers.
2. G.R.Chatwal, Pharmaceutical Chemistry Organic Vol-II, Himalaya Publishing House, Bombay.
3. Dr.J.L.Jain, Fundamentals of Biochemistry, S.Chand & Company Ltd. New Delhi.
4. Harkishan Sing V.K. Kapoor, Organic Pharmaceutical Chemistry, Vallabh Prakashan, Delhi.
5. Harkishan Sing V.K.Kapoor, Medicinal and Pharmaceutical Chemistry, Vallabh Prakashan, Delhi.
6. John H.Block, John M.Beak, Jr. Organic Medicinal and Pharmaceutical Chemistry, Lippincot Williams & Wilkins.
7. Stenlake & Beckett. Practical Pharmaceutical Chemistry Part I, CBS Publishers and Distributors, New Delhi.
8. Surendra N. Pandeya, A Text book of Medicinal Chemistry.

B.Sc. II YEAR
SEMESTER III
PRACTICAL
PHARMACEUTICAL CHEMISTRY

Total allotted hours:
Examination: 4 hours

Max.Marks:50

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| I | Preparation of Organic Compounds:
(a) Phenyl Benzoate (b) I-Phenyl Azo- β -naphthol (c) Phthalimide.
(d) Benzanilide (e) Hippuric Acid (f) Naphthyl acetate (g) Succinic anhydride.
(h) Di-azo-amino benzene (i) 2,4-Dinitro toluene (j) 2,4,6-Tribromo aniline.
(k) p-acetaniside. (l) p-bromoaniline. | 12 Marks |
| II | Isolation:
(a) Starch from potatoes (b) Hippuric acid from Cow's urine.
(c) Citric acid from Lemon juice as calcium citrate. (d) Solanin from Potatoes. | 12 Marks |
| III | Instrumentation
(i) Hardness tester
(ii) Disintegration time apparatus | 06 Marks |
| IV | Identification of Drugs: Aspirin , Paracetamol,Ibuprofen & Analgin | 06 Marks |
| V | Viva | 06 Marks |
| VI | Practical record | 08 Marks |