

B.Pharm. (CBCS Pattern) Semester-IV
BP402T - Medicinal Chemistry-I

P. Pages : 3

Time : Three Hours



GUG/W/24/11991

Max. Marks : 75

- Notes :
1. All questions carry equal marks.
 2. Diagrams and Chemical equation should be given wherever necessary.
 3. All questions are compulsory.

1. Multiple choice questions.

20

- i) Phenoxybenzamine inhibits the uptake of
 - a) Histamine
 - b) Catecholamine
 - c) Prazosin
 - d) Carvedial
- ii) Sedative action of barbiturates is due to substitution at C5 is due to:
 - a) High lipophilicity of groups at C5
 - b) Steric effect
 - c) Metal complex formation
 - d) Isosteric effect
- iii) ----- reaction is most common in drugs having ester or amide functional groups.
 - a) Oxidative reactions
 - b) Reduction
 - c) Hydrolysis
 - d) Phase I
- iv) Which of the following substance is the first precursor of Adrenaline formation.
 - a) DOPA
 - b) Dopamine
 - c) Tyrosine
 - d) Adrenaline
- v) Which Century is regarded as birth year of Medicinal Chemistry?
 - a) 20th
 - b) 19th
 - c) 21st
 - d) 18th
- vi) Hydantoin is a basically-----
 - a) Imidazolidine-2,3-dione
 - b) Imidazolidine-2,5-dione
 - c) Imidazolidine-2,2-dione
 - d) Imidazolidine-2,4-dione
- vii) Which of the following has the ultrashort action as general anaesthetics?
 - a) Halothane
 - b) Nitrous oxide
 - c) Thiopental
 - d) Ketamine
- viii) Acetylation or methylation of morphine produces-
 - a) Codeine
 - b) Methadone
 - c) Heroin
 - d) Ethyl morphine

- ix) Who is the founder of modern medicine-
- | | |
|----------------|----------|
| a) Hippocrates | b) Clark |
| c) Charak | d) Henry |
- x) Solubility of drug in solvents depends upon
- | | |
|-----------------------|------------------|
| a) Chemical structure | b) Particle size |
| c) Crystal Form | d) All of Above |
- xi) Tyrosine is a type of agonist-
- | | |
|------------------|--------------------|
| a) Direct acting | b) Indirect acting |
| c) Dual acting | d) None of above |
- xii) Aspirin is-
- | | |
|----------------------------------|---------------------------------|
| a) Salicylic acid derivative | b) p-aminophenol derivatives |
| c) Pyrazolidinedione derivatives | d) Anthranilic acid derivatives |
- xiii) The drug which act by blocking dopamine receptor especially D₂ receptor is
- | | |
|-----------------------------|-----------------------|
| a) Prochlorperazine Maleate | b) Loxapine Succinate |
| c) Clozapine | d) Haloperidol |
- xiv) In ethylene bridge Incorporation of beta substitution leads to reduction of-
- | | |
|------------------------|-----------------------|
| a) Muscarinic activity | b) Nicotinic activity |
| c) No change | d) All of above |
- xv) Which of the following is considered as best & safe general anesthetics?
- | | |
|-------------------------|-----------------|
| a) Halothane | b) Ethers |
| c) Nitrous oxide or Gas | d) Hydrocarbans |
- xvi) Dimercaprol is a chelating agent used in treatment of
- | | |
|----------------------|-----------------------|
| a) Arsenic poisoning | b) Lead poisoning |
| c) Iron poisoning | d) Vanadium poisoning |
- xvii) Cardio selective β receptor blocking agents works on which receptor?
- | | |
|-----------------|--------------------------|
| a) β_1 | b) β_1 & β_2 |
| c) All of above | d) None of above |
- xviii) Which drug is used as an antidote in overdose of Clonidine?
- | | |
|--------------------|----------------------|
| a) Pentazocine HCL | b) Morphine sulphate |
| c) Loperamide HCL | d) Naloxone HCL |
- xix) Autonomic Nervous system contains which type of muscle?
- | | |
|----------------|------------------|
| a) Involuntary | b) Voluntary |
| c) Both a & b | d) None of above |
- xx) Partition coefficient is one of the physiochemical parameters which influence
- | | |
|----------------------|--------------------|
| a) Drug transport | b) Drug solubility |
| c) Drug distribution | d) All of above |

2. Solve any two. 20

- i) Discuss SAR of beta blockers along with synthesis of Propranolol.
- ii) Explain in detail Phase I and Phase II reactions.
- iii) Write SAR, MOA of anticonvulsant drugs & Explain Phenytoin.

3. Solve any seven. 35

- i) What are anti-inflammatory agents, give structure, IUPAC name, MOA and uses of Naproxen.
- ii) Write in detail about History & development of Medicinal Chemistry.
- iii) What are anti-psychotics agents & write synthesis of Chlorpromazine hydrochloride.
- iv) Explain SAR of Morphine analogue.
- v) Classify Sympathomimetic. agent along with note on Adrenaline & Noradrenaline.
- vi) Give SAR of Barbiturates.
- vii) Note on Optical and Geometrical Isomerism and give application in medicinal chemistry.
- viii) Explain Catabolism of Catecholamine.
- ix) Discuss Biosynthesis & Catabolism of acetylcholine.
