

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

P. Pages : 3

Time : Three Hours



GUG/S/25/11991

Max. Marks : 75

Note : All questions are compulsory.

1. Multiple Choice Questions.

**1x20
=20**

- 1) Medicinal chemistry is a science whose roots are interlinked with-
a) Chemistry and biology b) Chemistry and physics
c) Technology and biology d) None of above
- 2) Who is the founder of modern medicine?
a) Hippocrates b) Clark
c) Charak d) Henry's
- 3) Which of the following co-enzyme used in glucuronidation reaction is-
a) UDPGA b) PAPS
c) SAM d) None of above
- 4) Epinephrine is used in the treatment of which of the following conditions?
a) Hypertension b) Anaphylactic shock
c) Bradycardia d) Peptic ulcers
- 5) Antipsychotic drugs are also known as-
a) CNS depressants b) CNS stimulants
c) Neuroleptic drugs d) Antidepressant drugs
- 6) The β_1 receptors are located in-
a) Kidney b) Heart
c) Lungs d) Adrenal gland
- 7) Which drug is a non-benzodiazepine hypnotic?
a) Zolpidem b) Diazepam
c) Lorazepam d) Chlordiazepoxide
- 8) Which of the following is an imidazole derivative and potent competitive antagonist at both α_1 and α_2 receptors?
a) Prazosin b) Phenoxybenzamine
c) Labetalol d) Phentolamine
- 9) Which class of drugs is used as an antidote for organophosphate poisoning?
a) Cholinesterase inhibitors b) Beta-blockers
c) Cholinesterase reactivators d) Alpha agonists
- 10) 1-(3, 4-dihydroxyphenyl)-2-methylamino ethanol is-
a) Adrenaline b) Phenylephrine
c) Isoprenaline d) Propranolol

- 11) Which of the following opioid receptor types is responsible for euphoria & respiratory depression?
 - a) κ -receptor
 - b) μ -receptor
 - c) δ -receptor
 - d) None
- 12) Which of the following enzymes is responsible for the synthesis of norepinephrine from dopamine?
 - a) MAO
 - b) Tyrosine hydroxylase
 - c) Dopamine β -hydroxylase
 - d) COMT
- 13) What is the primary action of tropicamide in ophthalmology?
 - a) Pupil constriction
 - b) Pupil dilation
 - c) Reducing intraocular pressure
 - d) Enhancing tear production
- 14) Which of the following is an example of an inhalation anesthetic?
 - a) Propofol
 - b) Ketamine
 - c) Isoflurane
 - d) Etomidate
- 15) Which of the following is a long-acting barbiturate?
 - a) Phenobarbital
 - b) Pentobarbital
 - c) Secobarbital
 - d) Thiopental
- 16) Absence seizures also known as-
 - a) Petit mal
 - b) Myoclonic
 - c) Grand mal
 - d) Partial
- 17) Which of the following cholinergic blocking agents is used to treat Parkinson's disease?
 - a) Benztropine
 - b) Atropine
 - c) Pilocarpine
 - d) Rivastigmine
- 18) Propranolol is prepared by condensing.
 - a) α -naphthol and epichlorohydrin
 - b) α -naphthol and chloro-propranolol
 - c) Phenol and epichlorohydrin
 - d) chloro-naphthol and propranolol
- 19) Physostigmine is an example one of following class-
 - a) Reversible cholinesterase inhibitor
 - b) Irreversible cholinesterase inhibitor
 - c) Direct acting acetylcholine agonist
 - d) None of above
- 20) Bethanechol is primarily used for the treatment of-
 - a) Hypertension
 - b) Urinary retention
 - c) Bradycardia
 - d) Motion sickness

2. Solve **any two**.

**2x10
=20**

- a) Discuss the physiochemical properties in relation to biological activities and elaborate any two physicochemical properties.

- b) What are narcotic analgesics? Describe the SAR of morphine analogues. Discuss the chemical structure, IUPAC name, MOA, and uses of codeine.
- c) Define sedative & hypnotics. Explain the SAR of barbiturates. Give chemical structure, IUPAC name, MOA, synthesis & uses of barbital.

3. Solve any seven.

**7x5
=35**

- a) Explain the concept of Bio-isosterism in detail.
- b) Explain in detailed the SAR of sympathomimetic agents with examples.
- c) Write about biosynthesis, storage, release and catabolism of acetylcholine.
- d) Give synthesis, MOA & uses of phenytoin along with the SAR of hydantoin.
- e) Write a note on salicylic acid derivatives as an anti-inflammatory agent.
- f) Define & classify antipsychotics. Discuss the SAR of phenothiazine.
- g) Define, classify & explain the SAR of cholinolytic agents.
- h) Explain in detailed the SAR of beta-blockers with examples.
- i) Give MOA of anti-inflammatory agents along with synthesis & therapeutic uses of mefenamic acid.
