

# Question Paper

Exam Date & Time: 11-Jul-2023 (02:00 PM - 05:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

Pharmacology I (Theory) [PHA-BP404T-S2]

Marks: 75

Duration: 180 mins.

### I Multiple Choice Questions (MCQs)

Answer all the questions.

Section Duration: 30 mins

- 1) Atropine sulphate - (1)
- [attains higher concentration intracellularly than in plasma.](#)
- [is better absorbed from stomach.](#)
- [is excreted more in alkaline urine.](#)
- [is absorbed only via diffusion.](#)
- 2) Which of the following drugs predominantly accumulates in bones - (1)
- [Tetracycline.](#)
- [Chloroquine](#)
- [Digoxin](#)
- [Iodine](#)
- 3) Which among the following is least correct about bioavailability (BA) - (1)
- [BA assumes significance for drugs with low margin of safety.](#)
- [BA is defined as the rate of drug absorbed from a dosage form.](#)
- [BA considerations are important when precise dosage adjustments are needed.](#)
- [BA of anti-microbial regimens determine the success or failure of therapy.](#)
- 4) Which among the following is not a catecholamine? (1)
- [Epinephrine](#)
- [Nor-adrenaline](#)
- [Ephedrine](#)
- [Dopamine](#)
- 5) The adrenergic receptor that plays a predominant role in vasodilation is- (1)
- [Alpha-1](#)
- [Alpha-2](#)
- [Beta-1](#)
- [Beta-2](#)
- 6) Which among the following receptors is not a metabotropic receptor? (1)
- [5-HT1](#)
- [5-HT2](#)
- [5-HT3](#)

[5-HT4](#)

7) Which of the following drugs produce dissociative anaesthesia? (1)

[Halothane](#)

[Ketamine](#)

[Diethyl ether](#)

[Nitrous dioxide](#)

8) Which of the antipsychotic drugs produce relatively high extrapyramidal side effects? (1)

[Triflupromazine](#)

[Olanzapine](#)

[Clozapine](#)

[Ziprasidone](#)

9) Which of these drugs may produce diabetes insipidus as an adverse effect? (1)

[Lithium](#)

[Moclobemide](#)

[Buspirone](#)

[Chlorpromazine](#)

10) Which among the following is useful in treating phenothiazine induced extrapyramidal side effects? (1)

[Levodopa](#)

[Bromocriptine](#)

[Trihexyphenidyl](#)

[Entacapone](#)

11) Which of the following most accurately describes the transmembrane signalling process involved in the steroid hormone action? (1)

[Action on a membrane spanning tyrosine kinase](#)

[Action of a G protein, which activates or inhibits adenylyl cyclase](#)

[Diffusion across the membrane and binding to an intercellular receptor](#)

[Opening of transmembrane ion channels](#)

12) Which of the following statements best describes an 'Orphan drug'? (1)

[It is a drug which acts on orphanin receptors](#)

[It is a very cheap drug](#)

[It is a drug which has no therapeutic use](#)

[It is a drug required for treatment or prevention of a rare disease](#)

13) Receptor mediated action is not seen in (1)

[Alcohol](#)

[Antipsychotic](#)

[Benzodiazepines](#)

[General Anaesthetics](#)

14) Antagonism between acetylcholine and atropine is: (1)

[Competitive antagonism](#)

[Physiological antagonism](#)

[Non-competitive antagonism](#)

[Chemical antagonism](#)

- 15) Local anesthetics (1)
- [Block the release of neurotransmitters](#)
  - [Block the influx of sodium into the cell](#)
  - [Increase the release of inhibitory neurotransmitters](#)
  - [Inhibit the efflux of sodium from neurons](#)
- 16) Flumazenil is (1)
- [Diazepam inverse agonist](#)
  - [Diazepam antagonist](#)
  - [Opioid antagonist](#)
  - [Opioid inverse agonist](#)
- 17) Ethosuximide is used in the treatment of (1)
- [Tonic clonic seizures](#)
  - [Absence seizures](#)
  - [Myoclonic seizures](#)
  - [Simple partial seizures](#)
- 18) Opioid analgesic used in treatment of cough? (1)
- [Noscapine](#)
  - [Codeine](#)
  - [Dextromethorphan](#)
  - [Meperidine](#)
- 19) Synaptic transmission in the autonomic ganglion is usually: (1)
- [Adrenergic](#)
  - [Cholinergic](#)
  - [Peptidergic](#)
  - [Mediated by substance P](#)
- 20) Diagnosis of myasthenia gravis is by using- (1)
- [Edrophonium](#)
  - [Neostigmine](#)
  - [Succinylcholine](#)
  - [Atropine](#)

## II Long Answers

Answer all the questions.

- 1) Classify receptor super families with examples. Explain the signal transducer mechanisms operating in different G protein coupled receptors. (10)
- 2) Explain the different drug synthetic biotransformation reactions with examples. (10)

## III Short Answers

Answer all the questions.

- 1) Enumerate the routes of administration of drugs, Mention the advantages and disadvantages of sublingual route of drug administration. (5)
- 2) Explain any two drug related and 3 patient related factor modifying drug action (5)
- 3) Classify anti-cholinesterases with examples. With a neat picture describe the mechanisms of action of reversible anti-cholinesterase (5)
- 4) Explain the mechanism of action of any three classes of antiepileptic drugs (5)

- 5) Giving examples list the uses of adrenergic alpha receptor blockers. (5)
- 6) Explain the factors that affect the partial pressure of anaesthetic attained in the brain. (5)
- 7) Briefly writing their mechanism, list the drugs for parkinsonism. What are the benefits of 'Co-careldopa'? (5)

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