Sem. IV 2024

Paper / Subject Code: 69114 / Pharmacology- I

Duration: 3 Hrs **Total marks: 75**

N.B. : 1. All questions are compulsory
2. Figures to right indicate full marks

I. Multiple Choice Questions (MCQs) (Answer all the questions). 20 marks

1. The majority of drugs cross biological membranes primarily by:
   a. Passive diffusion b. Facilitated diffusion
   c. Active transport d. Pinocytosis

2. Bioavailability of drug refers to:
   a. Percentage of administered dose that reaches systemic circulation in the unchanged form
   b. Ratio of oral to parenteral dose
   c. Ratio of orally administered drug to that excreted in the faeces
   d. Ratio of drug excreted unchanged in urine to that excreted as metabolites

3. The antagonism between adrenaline and histamine is called physiological antagonism because:
   a. Both are physiologically present in the body
   b. They act on physiological receptors
   c. Both affect many physiological processes
   d. They have opposite physiological effects receptor

4. When one drug affects the absorption of another drug, both are said to exhibit:
   a. Pharmacodynamic interaction b. Pharmacokinetic interaction
   c. Synergism d. Potentiation

5. Physostigmine differs from neostigmine in that:
   a. It is synthetic in origin b. It penetrates the cornea
   c. It has poor oral absorption d. Predominantly acts on skeletal muscle

6. Atropine markedly reduces the secretions from:
   a. Gastric glands b. Salivary glands
   c. Liver d. Pancreas

7. Disulfiram is useful in:
   a. Controlling alcohol withdrawal symptoms b. Treating alcohol toxicity
   c. Reducing craving for alcohol d. Treating alcohol dependence

8. The antiepileptics have following mechanisms EXCEPT:
   a. Prolongation of sodium channel inactivation
   b. Facilitation of T type calcium current
   c. Inhibition of glutamate activity
   d. Facilitation of GABA activity

9. _____ are also termed as analeptics.
   a. CNS and Respiratory stimulant b. CNS and Respiratory depressant
   c. Psychotic d. Hallucinogens

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10. _____ drug act as antagonist on opioid receptors.
a. Naltrexone
b. Meperidine
c. Fentanyl
d. Morphine

11. Parameter that signifies the rate of excretion of drugs is:
a. Clearance
b. Volume of distribution
c. Bioavailability
d. Steady-state plasma concentration

12. Correct process of new drug development is:
a. Drug discovery → Clinical development → Preclinical development
b. Clinical development → Preclinical development → Drug discovery
c. Preclinical development → Drug discovery → Clinical development
d. Drug discovery → Preclinical development → Clinical development

13. The bladder trigone and prostatic muscles are relaxed by:
a. Adrenergic α1 agonists
b. Adrenergic α1 antagonists
c. Adrenergic α_2 agonists
d. Adrenergic α_2 antagonists

14. The _____ stage of anesthesia is expected to be skipped during induction of anesthesia
a. Stage I
b. Stage II
c. Stage III
d. Stage IV

15. The drug that is categorized as hallucinogen is:
a. Caffeine
b. Atropine
c. Lysergic acid diethylamide
d. Acetylcholine

16. Atypical antipsychotics acts on:
a. Only dopaminergic receptor
b. Dopamine and 5HT receptor
c. Only 5HT receptor
d. Only Noradrenaline receptor

17. Distribution is:
a. Movement of the drug out of the body
b. Chemical alteration of the drug
c. Reversible movement of drug between different body compartments
d. Process by which drug enters the body

18. Therapeutic index refers to:
a. safety margin of the drug
b. dose which shows therapeutic effect
c. ability of the drug to show therapeutic effect
d. ratio of median effective dose to median lethal dose

19. Adrenaline injected with a local anaesthetic:
a. Reduces local toxicity of the local anaesthetic
b. Provides a more bloodless field for surgery
c. Shortens duration of local anaesthesia
d. Makes the injection less painful

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20. The anesthetic agent that causes diffusion hypoxia especially when given alone
a. Halothane
b. Ketamine
c. Nitrous oxide
d. Thiopental

II. Long Answers (Answer 2 out of 3) **20 marks**

A. Explain the phase I and phase II reactions in detail.
B. Define Parasympathomimetic. Classify them and add a detailed note on Pharmacology of Acetylcholine.
C. Give a detailed note on drugs used in treatment of Parkinson's disease.

III. Short Answers (Answer 7 out of 9) **35 marks**

A. Give the advantages and disadvantages of oral route.
B. Enlist various factors modifying drug actions. Explain any 2 in detail.
C. Discuss the transmembrane enzyme-linked receptors.
D. Add a note on drugs used in Glaucoma.
E. Discuss the mechanism of action, side effects and uses of Beta blockers.
F. Give detailed note on dissociative anesthesia.
G. Give mechanism of action and adverse effect of phenytoin.
H. Classify opioid analgesics. Add note on opioid antagonist.
I. Discuss in detail atypical antipsychotics.

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