

Duration: 3 Hrs

Total marks: 75

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

- Q. 1. Multiple Choice Questions (MCQs) (Answer all the questions). 20**
- The advantages of oral route include _____.
 - It can be given to unconscious patient
 - Medicament needs to be sterile
 - It is noninvasive
 - It is expensive
 - Agonist is _____.
 - An agent which activates a receptor to reduce submaximal effect but antagonizes the action of a full agonist
 - An agent which prevents the action of an agonist on a receptor or the subsequent response, but does not have any effect of its own
 - An agent which activates a receptor to produce an effect in the opposite direction to that of the agonist
 - An agent which activates a receptor to produce an effect similar to that of the physiological signal molecule
 - The extent of separation of DRCs of a drug for different effects is a measure of its _____.
 - Safety
 - Potency
 - Therapeutic effect
 - Selectivity
 - The receptor that mediates its action in milliseconds is _____.
 - Ion channel receptors
 - GPCR
 - Transmembrane enzyme-linked receptor
 - Receptors regulating gene expression
 - Prazosin is a _____.
 - Alpha 2 selective blocker
 - Beta 1 selective blocker
 - Alpha 1 selective blocker
 - Nonselective blocker
 - Which of the following statement is correct for Atropine?
 - It produces miosis
 - It is safer in elderly males
 - It is used in the treatment of Glaucoma
 - It is the specific antidote for anti-ChE poisoning
 - The _____ is a preanesthetic medicine
 - Opioids
 - Antipsychotics
 - Antidiarrhoeal
 - Antiepileptics
 - The mechanism of disulfiram is _____.
 - Aldehyde dehydrogenase inhibitor
 - Aldehyde dehydrogenase inducer
 - Alcohol dehydrogenase inhibitor
 - Alcohol dehydrogenase inducer

9. The _____ drug is preferred in treatment of mania
- | | |
|----------------|----------------|
| a. Moclobomide | b. Propranolol |
| c. Lidocaine | d. Lithium |
10. The only neuroprotective agent useful in treatment of Parkinson's disease is _____
- | | |
|---|----------------------------------|
| a. Monoamine oxidase inhibitor | b. Monoamine oxidase B inhibitor |
| c. Catechol O methyl transfer inhibitor | d. Dopa decarboxylase inhibitor |
11. The transport that carries a solute across the membrane against its concentration gradient is _____.
- | | |
|--------------------------|---------------------|
| a. Facilitated diffusion | b. Active transport |
| c. Passive diffusion | d. Filtration |
12. Alteration of the action of one drug at the target site by another drug, independent of a change in its concentration is called as _____.
- | | |
|--------------------------------|--------------------------|
| a. Pharmacokinetic interaction | b. Tachyphylaxis |
| c. Pharmacodynamic interaction | d. Adverse drug reaction |
13. At the muscle end-plate, d-tubocurarine reduces the:
- | |
|--|
| a. Number of Na ⁺ channels |
| b. Duration for which the Na ⁺ channels remain open |
| c. Ion conductance of the open Na ⁺ channel |
| d. Frequency of Na ⁺ channel opening |
14. Monoamine oxidase exerts _____ side effect
- | | |
|-----------------------|-------------------------|
| a. Serotonin syndrome | b. Wine reaction |
| c. Brain zaps | d. Postural hypotension |
15. Buspirone acts mainly acts on _____ receptor
- | | |
|---------------|-------------|
| a. 5HT | b. GABA |
| c. Adrenaline | d. Dopamine |
16. This class of drugs specifically stimulate respiration.
- | | |
|----------------|------------------------|
| a. Convulsants | b. Psychostimulants |
| c. Analeptics | d. Cerebroactive drugs |
17. An example of Phase II reaction is _____.
- | | |
|----------------|----------------------------|
| a. Cyclization | b. Glucuronide conjugation |
| c. Hydrolysis | d. Reduction |
18. An unwanted effect of a drug that occurs at therapeutic dose is called _____.
- | | |
|-----------------|---------------------|
| a. Intolerance | b. Secondary effect |
| c. Toxic effect | d. Side effect |
19. Ethanol is used in methanol poisoning because it _____.
- | |
|---|
| a. Antagonises the actions of methanol |
| b. Stimulates the metabolism of methanol and reduces its blood level |
| c. Inhibits the metabolism of methanol and generation of toxic metabolite |
| d. Replenishes the folate stores depleted by methanol |

20. Field block anesthesia is a _____ type of local anesthetic technique
- | | |
|--------------------------------|-----------------------|
| a. Infiltration anesthesia | b. Surface anesthesia |
| c. Conduction block anesthesia | d. Spinal anesthesia |

2. **Long Answers (Answer 2 out of 3)**

20

- A. What are the different principles of drug action? Explain the signal transduction mechanism for transmembrane enzyme linked and JAK-STAT binding receptors.
- B. Define sympathomimetics. Classify them and add a detailed note on the pharmacology of Adrenaline.
- C. Classify antiepileptics. Discuss in detail mechanism and adverse effect of phenytoin and valproic acid

3. **Short Answers (Answer 7 out of 9)**

35

- A. What is excretion? Explain the renal excretion in detail.
- B. Enlist various factors modifying drug actions. Explain any two in detail.
- C. Write a note on receptor antagonism.
- D. Discuss the mechanism of action, uses, and side effects of Beta blockers.
- E. Classify local anaesthetics. Discuss its mechanism of action.
- F. Discuss the factors governing the induction and recovery of volatile anesthetics
- G. Compare and contrast between benzodiazepines and barbiturates.
- H. Discuss the pharmacological actions of Morphine.
- I. Give an account of anticholinesterase in treatment of Alzheimer's disease
