

SPECIMEN QUESTION PAPER FOR 2nd PROF ANNUAL EXAMINATION MBBS

Subject: Pharmacology

Attempt all questions

Time allowed 2hrs&15mins

Total Marks 90

Short Essay Questions

- Q1** A. Define drug interaction. Give two examples for invitro and invivo drug interactions. (5)
B. Explain mechanism of Cross- tolerance and Cross- allergy with examples. (5)
- Q2** A. What are the pharmacological effects of Dopamine on CVS and also give adverse effects of dopamine. (5)
B. Give drug treatment for Acetylsalicylic acid & Acetoaminophen poisoning. (5)
- Q3** A. What is the mechanism of action of Ranitidine and Triamterene. Also enumerate their clinical uses. (5)
B. Briefly describe clinical uses of i. Lamotrigine ii. Ace-Inhibitors iii. Prostaglandins. (5)

Problem Based Question.

A 57 years old smoker with a history of chronic obstructive lung disease presents in medical emergency with difficulty in breathing and is also unable to speak. Which of the following drugs, is drug of choice for relieving patients symptoms. Justify your option and also give preferred route of administration.

1. a) Mast cell stabilizers, b) Leukotriene receptor antagonist, c) Salbutamol, d) Prednisone, e) Acetylcysteine. (10)
2. Name bronchodilators and give their mechanism of action. (10)
3. What is the role of mast cell stabilizers and Leukotriene antagonists in management of bronchial asthma . (10)

Long Essay Questions

- Q1** A. Classify anti-neoplastic drugs. What is the mechanism of action of methotrexate. (15)
B. Give clinical uses and adverse effects of methotrexate. Also explain mechanism of resistance to the action of drug (15)

MCQS SPECIMEN FOR 2nd PROF ANNUAL EXAMINATION MBBS

Total MCQS 30

Each questions carries 1.5 marks.

Select one best of option.

Time allowed 45mins

Total marks. 45

1. Which of the following chemicals does NOT satisfy the criteria for a neurotransmitter role in the CNS?
 - a. Acetylcholine
 - b. Dopamine
 - c. Glycine
 - d. Nitric oxide
 - e. Substance P

2. Many therapeutically useful drugs act via brain dopaminergic system. Which mechanism underlying their actions is NOT likely to be useful in the management of Parkinson's disease?
 - a. Inhibition of dopamine reuptake
 - b. Increase in dopamine synthesis
 - c. Activation of dopamine receptors
 - d. Inhibition of dopamine metabolism
 - e. Blockade of dopamine receptors

3. Which neurotransmitter does NOT change membrane excitability by decreasing K^+ Conductance?
 - a. Acetylcholine
 - b. Dopamine
 - c. Glutamic acid
 - d. Norepinephrine
 - e. Serotonin

4. Which receptor shares the same potassium channel as the 5-HT_{1A} receptor?
 - a. Delta opioid receptor
 - b. Dopamine D₂ receptor
 - c. GABA_B receptor
 - d. Muscarinic M₁ receptor
 - e. substance P receptor

5. In strychnine poisoning convulsions occur because of antagonistic effects at receptors for
 - a. Asparatate
 - b. GABA
 - c. Glutamate
 - d. Glycine
 - e. Norpinephrine

6. Epinephrine added to a solution of lidocaine for a peripheral nerve block will
 - a. increase the risk of convulsions
 - b. increase the duration of anesthetic action of the local anesthetic
 - c. both A and B
 - d. Neither A nor B

7. Factors that influence the action of local anesthetics do NOT include
 - a. Acerylcholinesterase activity in the area
 - b. Amount of local anesthetic injected
 - c. Blood flow though the tissue in which the injection is made
 - d. Tissue pH
 - e. Use of vasoconstrictors

8. Respiratory depression after use of which of the following agents may be reversed by administration of flumazenil?
- Desflurane
 - Fentanyl
 - Ketamine
 - Midazolam
 - Propofol
9. An intravenous bolus dose of thiopental usually leads to loss of consciousness within 10-15 s. If no further drugs are administered, the patient will regain consciousness in just a few minutes. This is because thiopental is
- A good substrate for renal tubular secretion
 - Exhaled rapidly
 - Rapidly metabolized by hepatic enzymes
 - Redistributed from brain to other body tissues
 - Secreted in the bile
10. The inhalation anesthetic with the fastest onset of action is
- Enflurane
 - Isoflurane
 - Nitric oxide
 - Nitrogen dioxide
 - Nitrous oxide
11. Which statement concerning the effects of anesthetic agents is false?
- Relaxation of bronchiolar smooth muscle occurs during halothane anesthesia
 - Mild generalized muscle twitching occurs at high doses of enflurane
 - Chest muscle rigidity often follows the administration of fentanyl
 - Intraoperative use of midazolam with inhalation anesthetics may prolong the postanesthesia recovery period.
 - Severe hepatitis has been reported after the use of desflurane
12. With chronic use in seizure states, the adverse effects of this drug include coarsening of facial features, hirsutism, gingival hyperplasia, and osteomalacia.
- Carbamazepine
 - Ethosuximide
 - Gabapentin
 - Phenytoin
 - Valproic acid
13. The most frequent type of drug interaction that occurs in patients using benzodiazepines is
- Additive CNS depression
 - Antagonism of sedative or hypnotic actions
 - Competition for plasma protein binding
 - Induction of liver drug-metabolizing enzymes
 - Inhibition of liver drug-metabolizing enzymes
14. Which statement concerning the barbiturates is accurate?
- Symptoms of the abstinence syndrome are more severe during withdrawal from Phenobarbital than from secobarbital
 - Compared with barbiturates, the benzodiazepines exhibit a steeper dose-response relationship
 - Barbiturates may increase the half-life of drugs metabolized by the liver.
 - Alkalinization of the urine will accelerate the elimination of Phenobarbital
 - Respiratory depression caused by barbiturate over dosage can be reversed by flumazenil
15. Which of the following is most likely to result from treatment with moderate-high doses of diazepam.
- Alleviation of the symptoms of major depressive disorder
 - Agitation and possible hyperreflexia with abrupt discontinuance after chronic use
 - Increased porphyrin synthesis
 - Improved performance on tests of psychomotor function

16. Retrograde amnesia. which of the following process reduces the amount of drug in the body after administration but before entering the systemic circulation
- Excretion
 - Distribution
 - First order elimination
 - First pass effect
 - Diffusion
17. Biotransformation of the drug may result in any of the following process Except.
- Inactivation
 - Activation
 - Distribution
 - Modification
 - Excretion
18. Which of the following route of drug administration has most bio-availability
- Topical application
 - Oral route
 - Sublingual route
 - Subcutaneous route
 - Per-rectal route
19. Beta-blocker are clinically used in all of the following conditions except.
- Bronchial Asthma
 - Cardiac arrhythmias
 - Angina pectoris
 - Glaucoma
 - Phaeochromocytoma
20. Which of the following drugs has minimum anti-inflammatory activity
- Acetaminophen
 - Aspirin
 - Diclofenac sodium
 - Ibuprofen
 - Indomethacin
21. Which is drug of choice for management of neurogenic diabetes insipidus
- Amiloride
 - Demeclocycline
 - Desmopressin
 - Hydrochlorothiazide
 - Lithium
22. Which one of the following actions is characteristic of amiloride
- Alkalosis
 - Block of sodium re-absorption in proximal tubule
 - Hyperkalemia
 - Increase tubular re-absorption of calcium
 - Bicarbonaturia
23. A person has inability to concentrate urine. Treatment with desmopressin fails to correct the condition. Next option will be
- Acetazolamide
 - Amiloride
 - Lithium
 - Demeclocycline
 - Hydrochlorothiazide

24. A tubercular patient is taking INH, Rifampicin, PZA and streptomycin. He requires diuretic therapy for another condition. Which diuretic should not be given.
- Hydrochlorothiazide
 - Metolazone
 - Furosemide
 - Mannitol
 - Tramterene
25. Which effect is common to salbutamol, Theophylline and Ipratropium
- Constipation
 - Gastric distress
 - Tremors
 - Bronchodilation
 - Polyuria
26. Which one is unlikely adverse effects of gentamicin
- Ototoxicity
 - Nephrotoxicity
 - Dyspnoea
 - Neuromuscular blocking effect
 - Tinnitus
27. Which anti bacterial drug is bactericidal in nature;
- Ampicilin
 - Chloramphenicol
 - Minocycline
 - Sulfasoxazole
 - Doxycycline
28. A diuretic useful in both acute glaucoma and cerebral edema is
- Acetazolamide
 - Mannitol
 - Dorzolamide
 - Metolazone
 - Furosemide
29. Drug group commonly used as anti anxiety and sedative hypnotic is
- Barbiturates
 - Benzodiazepines
 - Alcohol
 - Meprobamate
 - Anti-depressants
30. β_2 agonists have following pharmacological actions except
- Relax bronchial smooth muscle
 - Inhibit release of mast cell and other inflammatory mediators
 - Increased heart rate
 - Decrease intracellular cyclic adenosine monophosphate
 - Stimulate adenylyl cyclase activity