



**All India Institute of Medical Sciences, Kalyani**  
**B.Sc. MLT First Year Final Examination, August 2024**

**Time: 3 Hrs.**

**Pharmacology**

**Marks: 100**

**INSTRUCTIONS:**

- Answer all questions.
- Illustrate your answers with well labelled diagram wherever necessary.
- Answer Pharmacology Section A & B in separate answer booklets.

**SECTION – A (40 MARKS)**

**Short or Brief Answer Questions:**

**[8×5=40]**


1. Explain the mechanism of action, uses and adverse effects of Thiazide diuretics. Give examples. (2+1+1+1)
2. Classify antianginal drugs. Explain the mechanism of action, uses and adverse effects of nitrates. (2+1+1+1)
3. Explain the mechanism of action, therapeutic uses and adverse effects of Fluoroquinolones and give some examples. (2+1+1+1)
4. Classify the various antiemetic agents with examples. Write the mechanism of action, uses and adverse effects of any one. (2+1+1+1)
5. Pharmacotherapy for Glaucoma. (5)
6. Write brief notes on uterine relaxants with examples. (5)
7. Drugs used in status epilepticus. (5)
8. Bronchodilators. (5)

**SECTION – B (40 MARKS)**

**Long Answer Questions:**

**[4×10=40]**

1. Classify antihypertensive agents. Explain the mechanism of action, uses and adverse effects of angiotensin converting enzyme inhibitors. (4+2+2+2)
2. Classify the various insulin preparations based on their onset and duration of action. Enumerate uses and adverse effects of Insulin therapy. Add a note on the management of Diabetic ketoacidosis. (4+2+2+2)
3. Classify routes of drug administration with examples. Write the advantages and disadvantages of Parenteral route of drug administration. (4+3+3)
4. Classify anti-malarial drugs and explain the mechanism of action, therapeutic uses and side effects of Chloroquine. (4+2+2+2)

  
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Enrollment No. \_\_\_\_\_

Invigilator sign: \_\_\_\_\_

**SECTION C (PHARMACOLOGY)**

**INSTRUCTIONS:**

- Section C (PHARMACOLOGY) should be answered in first 20 minutes of the Exam duration and handed over to the invigilators.
- Put one Tick (✓) mark to only one answer that you consider correct for each question.
- Mark your Tick (✓) in pen.

**Multiple Choice Questions (MCQs):**

**[20x1=20]**

1. Glucose is added in ORS to:
  - (a) Improve taste
  - (b) Decrease bacterial colonization of GIT
  - (c) Increase the stability
  - (d) Increase the absorption of sodium
2. Which of the following drugs acts by inhibiting cell wall synthesis?
  - (a) Erythromycin
  - (b) Cephalosporins
  - (c) Chloramphenicol
  - (d) Sulfonamides
3. Mannitol is used for treatment of
  - (a) Acute congestive glaucoma
  - (b) Pulmonary oedema
  - (c) Acute renal failure
  - (d) Congestive heart failure
4. Cilastatin is given along with:
  - (a) Imipenem
  - (b) Amoxicillin
  - (c) Erythromycin
  - (d) Ampicillin
5. Antagonist of heparin is:
  - (a) Protamine
  - (b) Vitamin K
  - (c) Warfarin
  - (d) Fresh frozen plasma
6. A newborn baby was born with phocomelia. It results due to which drug taken by mother during pregnancy?
  - (a) Tetracycline
  - (b) Thalidomide
  - (c) Warfarin
  - (d) Heparin
7. Most common dose related side effects of salbutamol is:
  - (a) Nervousness
  - (b) Palpitations
  - (c) Restlessness
  - (d) Tremors
8. Which of the following drug is useful in acute attack of migraine?
  - (a) Bromocriptine
  - (b) Cinnarizine
  - (c) Sumatriptan
  - (d) Ondansetron
9. Statins act on which enzyme?
  - (a) Acyl CoA synthetase
  - (b) Acyl CoA reductase
  - (c) HMG CoA synthetase
  - (d) HMG CoA reductase

10. Anti-tuberculosis treatment (ATT) causing orange coloured urine is:
- (a) Rifampicin
  - (b) Isoniazid
  - (c) Streptomycin
  - (d) Pyrazinamide
11. Drug of choice for treatment of acute asthmatic attacks is:
- (a) Leukotriene antagonists
  - (b) Lipoxygenase inhibitors
  - (c) Beta 2 agonists
  - (d) Anticholinergics
12. 'Essential drugs' are:
- (a) Life-saving drugs
  - (b) Drugs that meet the priority health care needs of the population
  - (c) Drugs that must be present in the emergency bag of a doctor
  - (d) Drugs that are listed in the pharmacopoeia of a country
13. If a drug is eliminated by first order kinetics:
- (a) A constant amount of the drug will be eliminated per unit time
  - (b) Its clearance value will remain constant
  - (c) Its elimination half-life will increase with dose
  - (d) It will be completely eliminated from the body in 2 and half-life period
14. The cyclooxygenase isoenzymes COX-1 and COX-2 differ from each other in that:
- (a) COX-1 is inducible while COX-2 is largely constitutive
  - (b) COX-1 is inhibited by aspirin but not COX-2
  - (c) COX-2 is inhibited by ibuprofen but not COX-1
  - (d) COX-1 is constitutive while COX-2 is largely inducible
15. Allopurinol lowers the plasma concentration of:
- (a) Hypoxanthine
  - (b) Xanthine
  - (c) Uric acid
  - (d) All of the above
16. The drug of choice for trigeminal neuralgia is:
- (a) Aspirin
  - (b) Imipramine
  - (c) Carbamazepine
  - (d) Valproic acid
17. The preferred diuretic for mobilizing edema fluid in Congestive heart failure is:
- (a) Hydrochlorothiazide
  - (b) Furosemide
  - (c) Metolazone
  - (d) Amiloride
18. The principal action common to all class I antiarrhythmic drugs is:
- (a) Na<sup>+</sup> channel blockade
  - (b) K<sup>+</sup> channel opening
  - (c) Depression of impulse conduction
  - (d) Prolongation of effective refractory period
19. The most efficacious drug for inhibiting round the clock gastric acid output is:
- (a) Omeprazole
  - (b) Cimetidine
  - (c) Pirenzepine
  - (d) Misoprostol
20. The following drug is a radical curative in vivax malaria:
- (a) Quinine
  - (b) Primaquine
  - (c) Mefloquine
  - (d) Chloroquine