

**M.B.B.S. SECOND PROFESSIONAL EXAMINATION, FEBRUARY-2025****PHARMACOLOGY****PAPER - SECOND****[Time allotted: Three hours]****SET - A****[Max Marks: 100]****Q. 1. Multiple choice questions (Darken the single best response in OMR sheet. Time allotted-20 minutes) (20 x 01 = 20)**

1. The most common adverse reaction to insulin is:
  - a. Hypoglycaemia
  - b. Lipodystrophy
  - c. Urticaria
  - d. Angioedema
2. The rare but characteristic adverse effect of HMGCoA reductase inhibitors is:
  - a. Onycholysis
  - b. Myopathy
  - c. Alopecia
  - d. Oculomucocutaneous syndrome
3. Select the drug that can help restore cardiac performance as well as prolong survival in CHF patients:
  - a. Spironolactone
  - b. Furosemide
  - c. Dobutamine
  - d. Metoprolol
4. Select the drug which is used by intravenous infusion for emergency control of tachycardia and sudden rise in blood pressure:
  - a. Amiodarone
  - b. Lignocaine
  - c. Esmolol
  - d. Disopyramide
5. Organic nitrates relax vascular smooth muscle by:
  - a. Increasing intracellular cyclic GMP
  - b. Increasing intracellular cyclic AMP
  - c. Decreasing intracellular cyclic AMP
  - d. Both 'A' and 'C' are correct
6. Thiazide diuretics and furosemide have directionally opposite effect on the net renal excretion of the following substance:
  - a. Uric acid
  - b. Calcium
  - c. Magnesium
  - d. Bicarbonate
7. Recombinant human erythropoietin is indicated for:
  - a. Megaloblastic anaemia
  - b. Haemolytic anaemia
  - c. Anaemia in patients of thalassemia
  - d. Anaemia in chronic renal failure patients
8. Which of the following 5- alpha reductase inhibitor that has been found useful in benign prostatic hypertrophy and male pattern baldness:
  - a. Flutamide
  - b. Finasteride
  - c. Prazosin
  - d. Minoxidil
9. What is the current name of the national program against tuberculosis?
  - a. Revised National Tuberculosis Control Program
  - b. End TB strategy
  - c. National Tuberculosis Eradication Program
  - d. National Tuberculosis Elimination Program
10. Which hormone acts through a cytoplasmic receptor:
  - a. Calcitriol
  - b. Prolactin
  - c. Vasopressin
  - d. None of the above
11. The glucocorticoid receptor is located:
  - a. On the outer surface of the cell membrane
  - b. On the inner surface of the cell membrane
  - c. In the cytoplasm
  - d. Inside the nucleus
12. Select the sulfonamide drug which is active against Pseudomonas and is used by topical application for prophylaxis of infection in burn cases:
  - a. Sulfadiazine
  - b. Silver sulfadiazine
  - c. Sulfadoxine
  - d. Sulfamethoxazole
13. Cloxacillin is indicated in infections caused by the following organism(s):
  - a. Staphylococci
  - b. Streptococci
  - c. Gonococci
  - d. All of the above
14. Corticosteroids are absolutely contraindicated in the following type of tuberculosis:
  - a. Miliary
  - b. Meningeal
  - c. Intestinal
  - d. Renal
15. The most important toxicity of amphotericin B is:
  - a. Nephrotoxicity
  - b. Neurotoxicity
  - c. Hepatotoxicity
  - d. Bone marrow depression
16. Select the drug that is fungicidal and acts by inhibiting fungal squalene epoxidase enzyme:
  - a. Ketoconazole
  - b. Terbinafine
  - c. Tolnaftate
  - d. Hamycin
17. Select the drug that acts by inhibiting HIV protease enzyme:
  - a. Zalcitabine
  - b. Efavirenz
  - c. Stavudine
  - d. Nelfinavir
18. The characteristic toxicity of doxorubicin is:
  - a. Kidney damage
  - b. Liver damage
  - c. Cardiomyopathy
  - d. Pulmonary fibrosis
19. Pilocarpine reduces intra ocular tension in open angle glaucoma by:
  - a. Contracting sphincter pupillae
  - b. Increasing tone of ciliary muscle
  - c. Reducing aqueous formation.
  - d. Enhancing uveo-scleral outflow
20. The vitamin that is regarded to be a hormone is:
  - a. Vitamin D
  - b. Vitamin C
  - c. Vitamin B12
  - d. Vitamin A

**PHARMACOLOGY  
PAPER- SECOND**

**Note:** Attempt all questions in sequence.  
Draw suitable diagrams (wherever necessary)

---

**Q. 2. Give reasons:** **(5 x 2 = 10)**

- a. Dutasteride is used for Benign Hypertrophy of Prostate (BHP)
- b. I/V Furosemide is used in Acute Pulmonary edema
- c. Multidrug therapy is used in treatment of tuberculosis
- d. LMWH is preferred over unfractionated heparin for anticoagulant therapy
- e. Estrogen & progesterone combination in oral contraceptive pill

**Q. 3. Problem based question:** **(4 x 2.5 = 10)**

A 10-year-old boy weighing 25 kg is brought with continuous fever for the past 7 days. Initially the fever was mild, but has gradually increased and the body temp. now is 103°F. The boy also complains of abdominal pain, bloating, loose motions, loss of appetite, occasional vomiting, weakness, malaise and cough. A local doctor had given some tablets for the past 3 days, but the condition has worsened. He looks ill, mildly dehydrated with coated tongue; pulse is 70/min, abdomen is distended and tender on pressing. Liver and spleen are palpable. The total leucocyte count is 5000/cumm. Blood for culture is sent. A provisional diagnosis of *typhoid (enteric) fever* is made.

- a. Should antibiotic therapy be started right away, or the report of blood culture awaited?
- b. If treatment is to be started, which antibiotic would be the most appropriate, and why?
- c. What should be the dose and duration of antibiotic therapy?
- d. Should a single antibiotic or a combination be used?

**Q. 4. Write briefly on:** **(4 x 6 = 24)**

- a. HAART
- b. Tinidazole
- c. Liposomal amphotericin B
- d. Enumerate and describe professional qualities and roles of a physician

**Q. 5. Structured question:**

(i) Classify Anti-Anginals. Write the mechanism of action and adverse effects of isosorbide dinitrate. **(2+4+4 = 10)**

(ii) Classify Antidiabetic drugs. What is the mechanism of action and adverse effects of Metformin? Enumerate two antidiabetic drugs which do not cause hypoglycaemia. Mention two uses of Metformin other than Diabetes mellitus. **(2+2+2+2+2 = 10)**

**Q. 6. Write short notes on:** **(4 x 4 = 16)**

- a. Draw labelled diagram showing mechanism of action of anticoagulants
- b. Antiplatelets drugs.
- c. Erythropoietin
- d. SERMs

\*\*\*\*\*