

M.B.B.S. SECOND PROFESSIONAL EXAMINATION, DECEMBER-2024**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. True about pioglitazone are all **except**:
 - a. Metabolized in the liver by CYP3A4
 - b. Selective agonist for the nuclear PPAR- γ
 - c. It causes transcription of gene for carbohydrate and fat metabolism
 - d. It should be avoided in a patient with cardio-vascular disease
2. Which of the following characteristics make metformin a preferred biguanide than phenformin?
 - a. It is more potent
 - b. It is less liable to cause lactic acidosis
 - c. It does not interfere with vitamin B12 absorption
 - d. It is not contraindicated in patients with kidney Disease
3. GnRH analogue used in hormonal treatment of carcinoma prostate is?
 - a. Goserelin
 - b. Nilutamide
 - c. Cyproterone acetate
 - d. Finasteride
4. Which of the following is **not** an adverse effect of excessive mineralocorticoid action?
 - a. Na⁺ and water retention
 - b. Acidosis
 - c. Aggravation of CHF associated myocardial fibrosis
 - d. Rise in blood pressure
5. Which of the following antifungal drug can be used in the treatment of Cushing syndrome?
 - a. Ketoconazole
 - b. Fluconazole
 - c. Itraconazole
 - d. Miconazole
6. Methotrexate should be given with which of the following to decrease its side effects?
 - a. Folic acid
 - b. Cyanocobalamin
 - c. Thiamine
 - d. Folinic acid
7. Abciximab is:
 - a. Antibody against IIb/IIIa receptors
 - b. Antibody against Ib/IX receptors
 - c. Topoisomerase inhibitor
 - d. Adenosine inhibitor
8. A patient diagnosed to have deep vein thrombosis is being treated with heparin. Which of the following test will you order to adjust its dosage?
 - a. Platelet count
 - b. Prothrombin time
 - c. Bleeding time
 - d. Activated partial thromboplastin time
9. Drug of choice in pregnancy induced hypertension is:
 - a. Amlodipine
 - b. Losartan
 - c. Hydrochlorothiazide
 - d. Labetalol
10. Coronary steal phenomenon is seen with:
 - a. Dipyridamole
 - b. Diltiazem
 - c. Propranolol
 - d. Verapamil
11. The major clinical use of nimodipine is in:
 - a. Hypertension
 - b. Angina pectoris
 - c. Subarachnoid haemorrhage
 - d. Raynaud's phenomenon
12. Hypercalcemia is caused by which drug:
 - a. Bumetanide
 - b. Spironolactone
 - c. Thiazide
 - d. Furosemide
13. Mechanism of action of penicillins and cephalosporins is to inhibit:
 - a. Cell wall synthesis
 - b. Leakage from cell membrane
 - c. Protein synthesis
 - d. DNA gyrase
14. A patient has hepatic encephalopathy. The drug of choice for gut sterilization in this patient is:
 - a. Neomycin
 - b. Netilmicin
 - c. Bleomycin
 - d. Amikacin
15. Ethambutol should be used very cautiously in childhood tuberculosis due to which of its side effect?
 - a. Ocular toxicity
 - b. Renal damage
 - c. Hepatotoxicity
 - d. Neurotoxicity
16. Antiviral drug having dual antiviral activity against HIV and HBV is:
 - a. Enfuvirtide
 - b. Emtricitabine
 - c. Abacavir
 - d. Entecavir
17. This drug is a Class IA antiarrhythmic drug:
 - a. Sotalol
 - b. Propranolol
 - c. Verapamil
 - d. Quinidine
18. Which of the following drug requires dose adjustment in renal failure?
 - a. Cefoperazone
 - b. Doxycycline
 - c. Streptomycin
 - d. Rifampicin
19. All of the following are Indications of bromocriptine **except**:
 - a. Prolactin-secreting adenomas
 - b. Amenorrhea-Galactorrhea
 - c. Prolactin deficiency
 - d. Acromegaly
20. Which of the following is **not** a α -Glucosidase inhibitor?
 - a. Acarbose
 - b. Miglitol
 - c. Voglibose
 - d. Pioglitazone

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

- Q. 2. Give reasons why:** (5 x 2 = 10)
- Lab monitoring not required with low molecular weight Heparin.
 - Antithyroid drugs given along with radioactive iodine in hyperthyroidism.
 - Clomiphene citrate in infertility.
 - Fluroquinolones contraindicated in children.
 - INH is given along with pyridoxine.
- Q. 3. Problem based question:** (4 x 2.5 = 10)
- A 42-year-old man presents to the OPD with severe headache, dizziness and fatigue. The patient is a known case of hypertension and is now recently diagnosed as diabetic. The patient had a blood pressure of 160/98 mmHg.
- Which class of anti-hypertensive drugs will be the most suitable in this condition?
 - Write the other therapeutic uses of this class of drugs.
 - What are the various adverse effects of this class of drugs?
 - If this patient had a potassium level of $>4.5\text{meq/L}$ which anti-hypertensive drug would be preferred and why?
- Q. 4. Write short notes on:** (4 x 6 = 24)
- Mifepristone
 - What is Empathy? What is the role of Empathy in the care of the patient?
 - Insulin sensitizers
 - Management of Thyroid Storm
- Q. 5. Structured question:**
- (i) (4 x 2.5 = 10)
- Classify the drugs used in Angina
 - Mechanism of action of Nitrates
 - Describe the role of β blockers in Angina
 - Explain coronary steal phenomenon with examples
- (ii) (4 x 2.5 = 10)
- Classify protein synthesis inhibitors
 - Explain the mechanism of action of Tetracyclines
 - List the therapeutic uses of Tetracyclines
 - Write the precautions for prescribing Tetracyclines
- Q. 6. Write in brief about:** (4 x 4 = 16)
- Therapeutic uses and adverse effect of Metronidazole
 - Artesunate combination therapy in Malaria
 - Alendronate
 - Parenteral iron therapy
