



All India Institute of Medical Sciences, Kalyani
Second Professional MBBS Examination (Batch 2020-21)

Time: 3 Hrs.

Pharmacology (Paper-II)

Marks: 100

- Answer all questions.
- Answer the questions in the same serial order strictly.
- Illustrate your answers with well labelled diagram wherever necessary.
- Answer each section in a separate answer book.

SECTION - A (50 MARKS)

Long answer question:

[(1+4)+2+3]

1. A 17-year-old girl was admitted to the emergency department with sudden loss of consciousness 30 minutes back. She was obtunded and responded only to pain. signs were temperature 97°F (36.1°C), blood pressure 110/70 mm Hg, pulse 112 bpm, respirations 22/min. Pertinent serum values were **bicarbonate 6 mEq/L** (normal 22-28 mEq/L), **glucose 647 mg/dL**, **creatinine 1.1 mg/dL** Urinalysis showed: **specific gravity 1.036**, **glucose 4+**, **ketones 4+**.
- a) Identify the possible cause and outline the management.
 - b) Discuss the significance of monitoring potassium level in this patient.
 - c) After successful management, what should be appropriate discharge advice and follow-up plan?

Write Short notes on:

(8X5=40)

2. Select appropriate drug in the following scenario: (2½X2)
- a) Mrs. C, a 35-year-old woman, presents with intense itching and a rash on her arms and legs especially at night. Upon examination, Mrs. C is found to have tiny raised serpentine lines (burrows) between her middle and index fingers of right hand
 - b) A 45-year-old non-diabetic, normotensive male with raised TG and LDL level
3. Write mechanism of action (2½+2½)
- a) Mycophenolate mofetil as immunosuppressant
 - b) Bisphosphonates in Osteoporosis
4. Mention clinical uses of – (5X1)
- a) Apixaban, b) Itopride, c) Omalizumab, d) Folic acid, e) Isotretinoin
5. Explain why: (2½+2½)
- a) Clomiphene citrate can be used in both male and female infertility
 - b) Deferoxamine is used in patient of thalassemia
6. Briefly discuss: (2½+2½)
- a) Adverse effects of prolonged systemic corticosteroids
 - b) Clopidogrel (Mechanism of action, Use)
7. Compare and contrast the following: (2½+2½)
- a) LMW Heparin and Unfractionated Heparin
 - b) Propylthiouracil and Carbimazole
8. An eight-year-old boy arrives at the emergency ward with severe respiratory distress and wheeze. Outline the pharmacological management that would provide relief to the boy. (5)
9. Select appropriate drug in the following scenario with justification: (2½+2½)
- a) A 36-year-old female suffering from H. pylori positive peptic ulcer
 - b) A 28-year-old female with 2nd trimester pregnancy suffering from anaemia

SECTION - B (50 MARKS)

Long answer question:

[4+2+(1+3)=10]

1. A 25-years-old male patient presents to the chest OPD with a history of intermittent fever, cough & unexplained loss of weight for last 3 weeks. He has been diagnosed as a case of Pulmonary Tuberculosis sensitive to first line drugs. He has similar history of TB infection one year back when he was declared as successfully treated.
- Outline management of this case.
 - Can pharmacogenetic variation modify adverse drug reaction profile of any first-line antitubercular drug? Answer with example.
 - Define MDR-TB. Enumerate drugs used for treatment of MDR-TB?

Write Short notes on:

(8X5=40)

2. Select appropriate drug in the following scenario with justification (2½+2½)
- A 20-year-old male suffering from Intestinal amoebiasis
 - A 55-year-old female suffering from mucor mycosis with a history of recent severe COVID-19 infection 4 weeks back
3. Write mechanism of action – (2½+2½)
- Spiramycin as antibacterial
 - Albendazole as anthelmintic
4. Mention clinical uses of – (5X1)
- Praziquantel, b) Sunitinib, c) Ganciclovir, d) Remdesivir, e) Rifaximin
5. Explain why: (2½+2½)
- Imipenem cannot be used as a single agent
 - Ritonavir is combined with other drugs for HIV management
6. Briefly discuss: (2½+2½)
- Management of Chemotherapy induced Nausea Vomiting
 - Role of Hormonal agents as anticancer drug
7. Compare and contrast the following: (2½+2½)
- MIC and MBC
 - Empirical therapy and Prophylactic Therapy
8. A 28-year-old male from New Delhi suffering from uncomplicated *P. falciparum* malaria. (3+2)
- Outline the pharmacological management.
 - Write mechanism of action of any one drug you mentioned above.
9. Select appropriate drug in the following scenario with justification: (2½+2½)
- A 36-year-old male doctor had accidental needle prick injury while collecting blood sample from an AIDS patient
 - Mrs. D is a 40-year-old woman who presents with 3 patches of hypo-pigmented skin on her arms and legs. She reports experiencing numbness in the affected areas. There was No Nerve thickening observed. AFB was not found from any of the skin lesion.