MANIPAL ACADEMY OF HIGHER EDUCATION

MELAKA MANIPAL MEDICAL COLLEGE (MANIPAL CAMPUS)

MBBS PHASE - I STAGE - II DEGREE EXAMINATION - OCTOBER 2021

SUBJECT: PHARMACOLOGY - PART - II (ESSAY)

Monday, October 04, 2021

Time : 10.30 a.m.- 12.30 p.m. Max. Marks : 60

- ✓ **Answer all the questions**
- ✓ **Draw diagrams wherever appropriate**

1A. Mention three groups of drugs with an example for each which reduce gastric acid secretion.

1B. List two therapeutic uses of aminoglycosides along with the causative organism.

(3+2 = 5 marks)

2A. List two alkylating agents and explain their anticancer action.

2B. Explain the term 'superinfection' with a suitable example.

(3+2 = 5 marks)

3A. List two selective serotonin reuptake inhibitors and mention their four advantages over tricyclic antidepressants.

3B. List two groups of drugs with an example for each used in the treatment of insomnia.

(3+2 = 5 marks)

4A. List two nitrates and explain their mechanism of action.

4B. Explain the pharmacological basis for using furosemide in the treatment of acute pulmonary edema.

(3 + 2 = 5 marks)

5A. A 35-year-old female consumes 15 tablets of paracetamol which she bought for the treatment of musculo-skeletal pain. She was rushed to the emergency department with complaints of vomiting and abdominal pain. Physical examination revealed right upper quadrant tenderness.

i) Mention the antidote used to treat this complication and explain how it is useful.

ii) List three other drugs used in the management of musculo-skeletal pain.

5B. List two drugs used in the treatment of generalized tonic clonic seizures and explain the mechanism of antiepileptic action of any one of them.

(4+3 = 7 marks)

6A. List two drugs belonging to different groups used in the treatment of hypertension and explain the mechanism of antihypertensive action of any one of them.

6B. Explain the mechanism of action of allopurinol.

(3+2 = 5 marks)

7A. What is 'first dose phenomenon'. Give an example of drug causing this phenomenon. Mention two measures to minimize first dose phenomenon.

7B. Explain the pharmacological action of adrenaline on heart.

(3+2 = 5 marks)

8A. What is competitive antagonism. Explain with a suitable example.

8B. What is 'redistribution'. Explain with an example.

(2½ + 2½ = 5 marks)

9A. List two low molecular weight heparins and mention their four advantages over heparin.

9B. List two antiplatelet agents and mention their two therapeutic uses.

(3+2 = 5 marks)

10A. List three advantages and three disadvantages of intravenous route of drug administration.

10B. List two drugs each used in the treatment of productive cough and non-productive cough.

(3+2 = 5 marks)

11A. A 50-year-old patient with a history of bronchial asthma comes to your out-patient department with symptoms like frequent urination, increased thirst and hunger. On examination the body weight is 90 Kg and casual (random) blood glucose is 300 mg/dl (16.65 mmol/L) and FBS is 140 mg/dl (7.78 mmol/L).

Select a group of drugs for the treatment of diabetes in this case (Step 4 of P-drug selection + scores table + summary) by comparing different groups following the principles of P-drug selection.

Table 1: Cost of antidiabetic drugs

Drug	Cost per tab/cap (in Rs.)	Drug	Cost per tab/cap (in Rs.)
Glibenclamide	0.4 -0.8	Metformin	0.6 – 1.5
Gliclazide	1.4 -7	Repaglinide	4 - 6
Glimepiride	1 - 6	Nateglinide	4 - 11
Glipizide	0.5 – 1.2	Pioglitazone	2 - 9
Tolbutamide	0.6 - 0.7		
Acarbose	4 - 8		
Miglitol	9 - 14		

11B. List two intermediate acting and two long acting insulin preparations.

(6+2 = 8 marks)