

MANIPAL ACADEMY OF HIGHER EDUCATION**MELAKA MANIPAL MEDICAL COLLEGE (MANIPAL CAMPUS)****MBBS PHASE - I STAGE - II DEGREE EXAMINATION – NOVEMBER 2020****SUBJECT: PHARMACOLOGY - PART - II (ESSAY)****Monday, November 02, 2020****Duration : 120 minutes****Max. marks : 60**

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- ✓ **Answer all the questions**
 - ✓ **Draw diagrams wherever appropriate**
- 1. Define the term 'bioavailability'. List four factors that affect bioavailability of an orally administered drug. List four clinical implications of plasma protein binding of drugs.**

(5 marks)
 - 2. Describe the term 'synergism' and write one synergistic drug combination. List any three types of drug antagonism with an example for each.**

(5 marks)
 - 3A. List two non-selective COX inhibitors and explain why they are contraindicated in patients with peptic ulcer.**
 - 3B. List two groups of drugs with an example for each used in parkinsonism.**

(3+ 2 = 5 marks)
 - 4A. List two local anesthetics. Mention two advantages and two limitations of combining local anesthetics with adrenaline.**
 - 4B. Explain the mechanism of action of physostigmine.**

(3 +2= 5 marks)

5A. A 23-year-old lady diagnosed with grand mal epilepsy needs long term treatment with an anticonvulsant drug. The treating physician, avoided prescribing one of the first line antiepileptic drugs, 'X' to the young lady as it is well known to cause certain cosmetic adverse effects.

- i) Identify the drug X and mention its one cosmetic adverse effect.**
- ii) List two other drugs useful in the treatment of grand mal epilepsy.**
- iii) Explain the mechanism of action of any one of the drugs used in grand mal epilepsy.**

5B. List two benzodiazepines. Explain their mechanism of action.

(4+3 =7 marks)

6A. Enumerate two selective estrogen receptor modulators (SERMs) and list their two therapeutic uses.

6B. List two examples and one therapeutic use of the following groups: 5- α reductase inhibitors and thioamides.

(2 + 3 = 5 marks)

- 7A. Explain the mechanism of action of metformin.**
- 7B. List two long acting glucocorticoids. Mention four measures to minimize HPA axis suppression due to glucocorticoid therapy.**

(2+ 3 = 5 marks)

- 8. List three drugs that are used as antacids. Describe the mechanism of action of omeprazole. List the drugs used in the triple drug regimen for *H. pylori* eradication as approved by US-FDA.**

(5 marks)

- 9. List two parenteral anticoagulants. Describe the mechanism of action of warfarin and list its four therapeutic uses.**

(5 marks)

- 10. List two groups of beta-lactam antibiotics with an example for each. Describe the mechanism of action of any one group and list its two adverse effects.**

(5 marks)

11A. A 60-year-old man with normal body built visits your clinic with a complaint of chest pain. Upon enquiry you come to know that he has no history of any cardiovascular disease. He explains to you that, he has been having several episodes of suffocating chest pain, which began during any kind of physical labor and disappeared after taking rest. Select a group of drugs to terminate the acute attack of suffocating chest pain in a similar case (only Step 4 of P-drug selection with scores + summary) by comparing different groups following the principles of P-drug selection.

Table 1: Cost of drugs

Drugs	Cost in Rs. (per tablet)
Tab. Atenolol	0.44-3.90
Tab. Bisoprolol	1.70- 4.00
Tab. Metoprolol	1.00- 4.00
Glyceryl trinitrate	0.98-6.28
Isosorbide dinitrate	0.20-0.43
Isosorbide mononitrate	1.26 – 9.70
Tab. Verapamil	0.67– 3.90
Tab. Diltiazem	0.49-19.3
Tab. Amlodipine	0.20– 7.20
Tab. Felodipine	2.20– 6.90
Tab. Nifedipine	0.93-8.26
Tab. Nicorandil	6.70- 26.60

11B. List two groups of drugs with an example for each used in peripheral vascular disease.

(6 + 2 = 8 marks)

