

# Question Paper

Exam Date & Time: 02-Mar-2020 (02:00 PM - 04:30 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

MELAKA MANIPAL MEDICAL COLLEGE (MANIPAL CAMPUS)  
MBBS PHASE - I STAGE - II DEGREE EXAMINATION - FEBRUARY/MARCH 2020  
Monday, March 02, 2020 Pharmacology [M2PHA]

### PHARMACOLOGY - PART - II (ESSAY)

Section Duration: 120 mins

Max. marks : 60

**Answer all the questions**

**Draw diagrams wherever appropriate**

1. Explain the following terms with suitable example:
  - 1A. Redistribution
  - 1B. Synergism

(2x2 = 4 marks)
2. Explain the term chemoprophylaxis with an example.

(2 marks)
3. Mention two advantages and two disadvantages of intravenous route of drug administration.

(2 marks)
4. Define the term 'biotransformation' and mention two enzyme inducers.

(2 marks)
5. John, a 45-year-old man visits his physician with complaints of moderate backache. After examination, the physician prescribes him an analgesic 'X' to be taken orally twice a day for 10 days. On day 3 of therapy, John revisits the physician with complaint of epigastric pain especially after meals.
  - 5A. Identify drug 'X' and explain its analgesic action
  - 5B. Explain the basis for the above mentioned adverse effect.

(2.5+1.5 = 4 marks)
6. Explain the mechanism of action of aminoglycosides.

(2 marks)
7. Mention two therapeutic use of ciprofloxacin with the causative organism involved.

(2 marks)
8. Mention two uses and two adverse effects of propranolol.

(2 marks)

9. Enumerate two centrally acting skeletal muscle relaxants and mention their two therapeutic uses. (2 marks)
10. Mention two advantages and two disadvantages of combining lignocaine with adrenaline. (2 marks)
11. Enumerate two atypical antipsychotics and list their two advantages over typical antipsychotics. (2 marks)
12. Explain the mechanism of action of following drugs:  
12A. Lithium  
12B. Warfarin (2x2 = 4 marks)
13. Explain the mechanism of action of omeprazole. (2 marks)
14. Mention two aims of preanaesthetic medication with an example of drug used to achieve each of them. (2 marks)
15. Explain the pharmacological basis of using ethosuximide in the treatment of absence seizures (petit mal epilepsy). (2 marks)
16. Enumerate two parenteral iron preparations and list two indications for parenteral iron therapy. (2 marks)
17. Mention two advantages and two disadvantages of radioactive iodine. (2 marks)
18. Enumerate two 5  $\alpha$  -reductase inhibitors and mention their two therapeutic uses. (2 marks)
19. Mention two groups of drugs with an example for each used in the treatment of bronchial asthma. (2 marks)
20. List two drugs each useful in the treatment of productive cough and non-productive cough. (2 marks)
21. List four drugs used in the treatment of hypertensive emergencies. (2 marks)
22. Mention two therapeutic uses and two contraindications of osmotic diuretics. (2 marks)
23. Enumerate two angiotensin converting enzyme inhibitors and mention their two therapeutic uses. (2 marks)
24. Mention two uses of nitrates along with the route of administration for each use. (2 marks)

25. A 50-year-old asthmatic male patient comes to your outpatient department with symptoms like frequent urination, increased thirst and hunger. His casual (random) blood glucose is 250 mg/dl (13.88 mmol/l) and FBS is 140 mg/dl (7.78 mmol/l). Select a group of drugs for the treatment of diabetes in a similar case (**Step 4 of P-drug selection + scores table + summary**) by comparing different groups following the principles of P-drug selection.

| <b>Drug</b>        | <b>Cost per tab. (in Rs.)</b> |
|--------------------|-------------------------------|
| Tab. glibenclamide | 0.4 -0.8                      |
| Tab. gliclazide    | 1.4 -7                        |
| Tab. glimepiride   | 1 - 6                         |
| Tab. glipizide     | 0.5 – 1.2                     |
| Tab. tolbutamide   | 0.6 - 0.7                     |
| Tab. metformin     | 0.6 – 1.5                     |
| Tab. repaglinide   | 4 - 6                         |
| Tab. nateglinide   | 4 - 11                        |
| Tab. pioglitazone  | 2 - 9                         |
| Tab. rosiglitazone | 3-10                          |
| Tab. acarbose      | 4 - 8                         |
| Tab. miglitol      | 9 - 14                        |

(6 marks)