

**Date: 28-03-2023**

**0323 E646**

**Second Year MBBS Examination**

**II MBBS Pharmacology Paper 1**

**Time: 3 hours**

**Max Marks: 100**

1. Answer to the points.
2. Figure to the right indicates marks.
3. Use separate answer books for each section.
4. Draw diagrams wherever necessary.
5. Write legibly.

## **Section 1**

**1. Answer any one of the following: (10)**

**a) Define bioavailability. Enumerate with examples the factors that affect bioavailability of a drug. What is the clinical importance of better bioavailability. (2+7+1=10)**

**b) Enumerate atropine substitutes. Mention the class adverse drug reactions (ADRs) of anticholinergic drugs providing**

**reasons. What is the drug of choice for**

REASONS. What is the drug of choice for management of Atropine poisoning?

(3+4+3=10)

**2. Answer any two of the following: (12)**

a) A 20 year old college going girl presents with insomnia for 3 weeks.

Enumerate 2 drug classes that can be prescribed for this patient citing reasons for your choice. Mention the instructions that you will give to her while explaining use of any one of the above drugs.

b) A patient is scheduled for a major surgery requiring general anesthesia the next day. Enumerate with justification the drugs to be prescribed and used as preanesthetic medication.

c) A 65 year old man is started on a new antihypertensive following which he is complaining of fainting especially when he gets up from his bed (orthostatic hypotension). Which class of drugs is the likely cause? If you had to choose an adrenergic antagonist for this individual as an antihypertensive, which group of drugs

will you choose and why?

**3. Write Short notes on any three of the following:** (18)

- a) Neostigmine (Mechanism of action, uses)
- b) Tramadol (Mechanism of action, uses)
- c) Drug antagonism (types)
- d) Sources of drugs with examples

**4. Answer any five of the following briefly:** (10)

- a) Enumerate enteral routes of drug administration with examples
- b) One clinical importance of determining Volume of distribution of a drug
- c) Mention the mechanism of action of Sodium Valproate in absence seizure
- d) Cheese reaction-cause, signs and symptoms & prevention
- e) Define Therapeutic index
- f) Define Serious adverse events

## Section 2

**5. Answer any one of the following: (10)**

- a) Enumerate antianginal drugs. Explain the mechanism of action and adverse drug reactions of any one class of antianginal drugs. What is "drug holiday" in terms of antianginal drug use?
- b) Enumerate antiplatelet agents. Explain the mechanism of action of two different types of antiplatelet agents. Outline the pharmacotherapy of acute myocardial infarction. (3+3+2+2=10) (2+4+4=10)

**6. Answer any two of the following: (12)**

- a) Mrs Y, 26 years, suffers from motion sickness. Mention one oral drug therapy that you may prescribe for her before a long road trip. Explain the mechanism of action of the chosen drug and the likely ADRs she may face.
- b) Mrs X 72 years, suffers from osteoarthritis for which she takes pain relievers that reduce inflammation. What is the mechanism of action of these agents and what ADRs should she be informed about?

c) Mrs Z, 25 years, is on Captopril for her hypertension. She reports to the prescriber stating she is pregnant for 6 weeks. Her BP is found to be controlled. Provide reasons for or against continuing her medication as before. Also suggest alternative drug if necessary.

**7. Write short notes on any three of the following:** (18)

- a) Iron chelating agents(names, mechanism of action uses)
- b) Loop diuretics(names, mechanism of action,uses)
- c) Low molecular weight heparin  
(Advantages over unfractionated heparin)
- d) Over the counter drugs (Related regulations, advantages and disadvantages)

**8. Answer any five of the following briefly:** (10)

- a) Write formulae for dose calculation in children

- b) Mention two important Adverse drug reactions with thiazide diuretics
- c) Why Streptokinase is not suitable for all patients with Cerebrovascular accident?
- d) Mention the mechanism of action of Statins in dyslipidemia
- e) Why Aspirin is contraindicated in gout management?
- f) Why Vitamin B12 and folic acid are prescribed concurrently in management of megaloblastic anemia?