

SS/MBBS-II/PHAR-I/12-24**2024****(December)****PHARMACOLOGY****Paper-I****Full Marks: 90****Time: 2 hours 50 minutes****The figures in the margin indicate full marks for the questions****Answer all questions**

Illustrate your answers with suitable diagrams and flowcharts wherever necessary.

Write the question number correctly.

Answer the questions in order.

1. What are the different receptor-mediated mechanisms of drug action? Explain the mechanism of drugs acting through nuclear or cytosolic receptors. Name two drugs or endogenous substances that act by this mechanism. (4+4+2=10)

2. What are the drugs that act by modifying the renin-angiotensin system? How do they act as antihypertensive? What are the side effects? What are their contraindications? (3+3+2+2=10)

3. Write short notes on:

(5×4=20)

- (a) Uses of atropine and its actions and uses in eye
- (b) Probiotics
- (c) Kinetics of elimination
- (d) D-penicillamine

4. Name the different types of oral contraceptives. Write down the mechanism of action and adverse effect of oral contraceptives. (4+3+3=10)

5. Explain why: (5×2=10)

- (a) Dopamine is administered in moderate doses in hypovolemic shock.
- (b) ACEIs are contraindicated in bilateral renal artery stenosis.
- (c) Misoprostol is used for the treatment of NSAID-induced peptic ulcer.
- (d) Potassium-sparing diuretics are used along with loop diuretics.
- (e) Clinical trials are necessary for approval of use of a drug in the community.

6. A 50-year-old obese man came with symptoms of breathlessness accompanied by wheezing. He is diagnosed to be a case of bronchial asthma. (4+3+3=10)

- (a) Name important drugs used in bronchial asthma.
- (b) How will you proceed for the treatment of the person?
- (c) State the beneficial effects of inhaled steroids.

7. Distinguish between: (3×5=15)

- (a) Heparin and Warfarin
- (b) First-order kinetics and Zero-order kinetics
- (c) Type I and Type IV drug allergic reactions
- (d) Non-selective β -blockers and β -1 selective blockers
- (e) Adrenaline and Noradrenaline

8. Discuss the role of a physician in the health care system. 5