

PHARMACOLOGY**PAPER-I**Time: 3 hours
Max. Marks:100

PHARMA/D/20/34/I

Important Instructions:

- **You are provided with 5 answer sheet booklets. Each individual answer sheet booklet consists of 10 pages excluding the covering jackets.**
- **Answers to all the questions must be attempted within these 5 answer sheet booklets which must be later tagged together at the end of the exam.**
- **No additional supplementary answer sheet booklet will be provided.**
- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

1. Write the significance of steady state of a drug. Define and explain the role of pharmacokinetics in determining:
a) Loading dose.
b) Maintenance dose. 5+5
2. How is bio-equivalence different from bio-availability? Highlight the difficulties in determining bioequivalence between the innovator molecule with its bio-similar in biologic drugs. 5+5
3. What are isobolograms? Mention their role in determining combined drug effects. 10
4. Mention drug delivery systems or formulations that are used for providing constant drug concentration in the body over long periods? How do they achieve their therapeutic benefit compared to other dosage forms? 5+5
5. Discuss the differences between Graded versus Quantal Dose Response Curve. Describe the clinical relevance of studying these curves. 5+5
6. Describe pharmacokinetics. Differentiate between first and zero order kinetics. Write the clinical significance of knowing the kinetic order of a drug. 2+6+2
7. Define therapeutic drug monitoring. Mention the characteristics of drugs which are the appropriate candidates for therapeutic drug monitoring. Describe precautions while doing therapeutic drug monitoring. 2+6+2

P.T.O.

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8. a) Gender based differences in drug therapy. 5 +5
b) Environmental Pharmacology.
9. a) Spurious drugs. 5+5
b) Designer drugs.
10. Explain what you understand by drug antagonism. Enumerate different types of antagonists in pharmacology. Explain details of receptor antagonism. 3+2+5

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