

PHARMACOLOGY
PAPER-I

PHARMA/D/17/34/I

Time: 3 hours
Max. Marks: 100

- 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 question to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

- Write the in-vitro and animal toxicity tests required for new drug development. 5+5
 - What are preclinical evaluation methods for potential antiepileptic new chemical entity?
- What are the ethical and regulatory issues in use of animals in biomedical research? 5+5
 - Composition and functions of Institutional Ethics Committee for research in human subjects.
- Methods of Pharmacovigilance with their advantages and limitations 5+5
 - Pharmacogenomics interlink with pharmacovigilance, giving examples.
- What are the inclusion and exclusion criteria of papers in meta analysis. What is the advantage of meta analysis? 5+5
 - What are the methods and implications of drug utilization studies?
- Difference between partial agonist and inverse agonist giving suitable examples. 4+6
 - Define median lethal dose and median effective dose and their importance in Therapeutics.
- Define bioavailability and how it is determined. Give suitable examples. 5+5
 - What is the difference between pharmaceutical equivalent and therapeutic equivalent? Give suitable equivalence.
- Role of Placebo in clinical trials. 5+5
 - Mention advantages and disadvantages of fixed dose combination.

8. a) Principles and steps in preparing National List of Essential Medicine (NLEM) 5+5
b) Potential uses of NLEM in rational therapeutics.
9. a) Define plasma half life of a drug and its clinical significance with suitable examples. 5+5
b) Nanotechnology in drug delivery system.
10. a) Define drug dependence and its mechanisms. 5+5
b) Principles of treatment of drug dependence with suitable examples.

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