PHARMACOLOGY

PAPER – I

PHARMA/D/15/34/I

Time : 3 hours
Max. Marks : 100

Important instructions:

- *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.	a) Enumerate basic pharmacokinetic parameters. b) Elaborate pharmacokinetic-pharmacodynamic (PK-PD) modeling of different compartmental models, and its clinical implication.	2+(4+4)
2.	a) Experimental Screening methods for potential anti-seizure activity of New Chemical Entity (NCE). b) Procedure, advantages & limitations of maximal electroshock model (MES) in rodents.	5+5
3.	a) Cytochrome P450 families. b) Clinical consequences of enzyme induction and therapeutic implication of this phenomenon.	5+(3+2)
4.	a) Sample size calculation for a clinical study. b) Its clinical and statistical significance.	5+5
5.	a) Principles of ELISA technique. b) Its utility in clinical practice with suitable examples.	5+5
6.	Alternatives to animal experiment in drug development process, and their advantages and disadvantages.	5+5
7.	a) Principles of nanotechnology; b) Different type of nano preparations and their advantages and limitations.	4+6
8.	a) Rational use of drug. b) How to implement it in clinical practice?	5+5
9.	a) Good Laboratory Practice (GLP) in drug development. b) Its advantages and limitations.	5+5
10.	a) Comparative assessment of three point and four point bio-assay. b) How to standardize the bio-assay apparatus?	5+5

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