

Code – PHTX 103

Your Roll No.

SCHOOL OF CHEMICAL & LIFE SCIENCES
PH.D. COURSE WORK EXAMINATION (OCTOBER 2023)
Elective Paper: Toxicology
Methods of Toxicology

Time: Three hours

Maximum Marks: 75

(Write your Roll No. at the top immediately on receipt of this question paper)

Answer ALL questions. All parts of a question must be answered in continuation. Start answering each question on a new page. Cite examples and draw labeled diagrams wherever applicable.

Question -1

Give brief answers to the following questions:

1.5 x10 = 15

- a. Clastogen
- b. Duration of sub-chronic toxicity study
- c. The most potent route of exposure
- d. Therapeutic Index
- e. Name one cell line of human origin
- f. RPMI stands for.....
- g. TD₅₀
- h. Sources of cell lines
- i. Potential dose
- j. Cytotoxicity

Q.2. Short note type; Attempt any 04 (not more than two pages)

4×5=20

1. Types of Chromosomal aberrations
2. Cell lines in toxicology studies
3. Mammalian models of toxicity testing
4. Alternate models in toxicological research
5. Micronucleus assay
6. Mechanisms of action of drug toxicity

Q.3. Long note type (no limit of pages). Attempt any 02

2×20=40

1. Discuss the different routes of administration.
2. Enumerate the important points related to the maintenance of cell culture.
3. Describe the requirements for carcinogenicity testing.
4. What are the systemic approaches related to carcinogenicity testing?
5. Write elaborative notes on the Ames test or Sister chromatid exchange test.
