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Course Name: MSc Toxicology, Semester-I End term Examination (2023-24)

Course Name: Principles of Toxicology
Time: 2½ hr

Paper Code: MTX-CC-101
Maximum Marks: 60

Note: This paper has three Sections A, B and C. Attempt the three Sections. Section A: Answer all the questions; Section B: Answer any 3 and Section C attempt any two questions.

Abbreviations Used

CO-Course Outcome, PO-program Outcome,

BTL-Bloom Taxonomy Level: BT level 1- Remember; BT level 2-Understand; BT level 3- Apply; BT level 4- Analyze; BT level 5- Evaluate, BT level 6 – Create.

SECTION A

Very Answer Short Type Questions. (1 X15)

[15]

Q. No.	Question	BTL	CLO	PLO
1.	The root word "toxic" is taken from which of the Latin word?	1	3	2
2.	King Mithridates VI is famous for which anecdote of toxicology?	1	4	3
3.	Atresia is one of the toxic effects of thalidomide. What is characteristic of this condition?	2	1	1
4.	What is in utero route of exposure to toxic chemicals?	2	3	6
5.	Give approximate value of LD50 of dichlorvos by oral route in rats.	5	2	8
6.	BalbC is the strain of which animal model?	5	1	7
7.	Write full form of NOAEL.	4	2	6
8.	Define pinocytosis.	2	3	5
9.	Write formula for calculation of volume of distribution (VD).	3	1	2
10.	Blood brain barrier (BBB) is fully formed at the birth (TRUE or FALSE).	1	1	4
11.	Name the toxic metabolite of paracetamol formed after Phase I metabolism.	1	4	1
12.	How many amino acids are in glutathione?	1	3	5
13.	Name a hormone important in regulating water balance.	1	3	4
14.	Name the free radical formed by metabolism of carbon tetrachloride.	1	4	6
15.	Name a toxic compound which undergoes phase III metabolism.	1	3	3

SECTION B

Short Answer Type Questions. (Attempt any three questions) (3X5)

[15]

Q. No.	Question	BTL	CLO	PLO
1.	3Rs and their importance in toxicology.	3	3	3
2.	Lung as site of absorption.	2	2	1
3.	Why in some cases dose-response curve is 'U' shaped?	3	4	2
4.	'Up and down' procedure of LD50 determination.	4	1	5
5.	Alcohol metabolism.	2	3	4
6.	Antagonistic type of chemical interaction.	5	3	8
7.	Harmful effect of oxidative stress.	2	2	7

SECTION C

Long Answer Type Questions. (Attempt any two questions) (2X15)

[30]

Q. No.	Question	BTL	CLO	PLO
1.	What is role of Orfila in development of principles of toxicology and forensic science? Give an example where his principles helped solve case of a murder.	1	4	3
2.	How thalidomide episode changed perception about drug and chemical? Illustrate harmful effects thalidomide.	4,5	3	7
3.	Describe various routes and mechanisms of absorption toxic chemicals.	4	2	6
4.	What role is played by Phase II reactions of toxicant metabolism? Elaborate sulfation reactions of Phase II metabolism.	2	2	4
5.	Write a detailed note on excretion mechanisms of toxicants. What is difference between excretion and elimination?	2	1	8

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