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

Paper Name: Molecular Toxicology

Paper Code: MTX-103

Time: 3h

Maximum Marks: 60

(Note: This paper has 3 section A, B and C, Attempt all the three sections. Section A: Answer all the questions; Section B: Answer any 4 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 Analyse; BT level 5-evaluate, BT level 6 Create

SECTION A

Very Short Type Questions (1 X20)

[20]

Q. No.	Question	BTL	CLO	PLO
1.	PCAP/PACAP is a polypeptide that stands for	1	1	2
2.	What percent of human genes are transcription factors?	1	1	1
3.	Bacteria and fungi have cell walls and do not have cellulose. (T/F)	1	2	2
4.	GCAP stands for	1	1	2
5.	What do you understand by the term Mosaicism?	1	2	2
6.	 cells are grown in culture as suspension.	1	3	2
7.	Western Blotting was developed in 1981 by.....	1	4	2
8.	Northern Blotting was discovered inUniversity.	1	4	1
9.	Autoradiography is a component of Southern Blotting. (T/F)	2	1	1
10.	FRET stands for	2	3	1
11.	Concentration of urea used for protein separation is	2	2	1
12.	Signaling systems involving act via direct cell-to-cell contact.	3	2	1
13.	 enzyme converts ATP to cAMP	3	2	1
14.	Example of a leucine zipper family is	3	2	3
15.	EXPOSURE + = RISK	1	2	3
16.	Example of PDE inhibitor is	2	2	3
17.	H3-K9 methylation is part of euchromatin (True/False)	3	5	2
18.	The inventor of Southern Blotting won award.	4	6	2
19.	GLUCOSE + = LACTOSE	1	3	2
20.	SELDI stands for	1	2	3

SECTION B

Short-type Questions. (Attempt any four questions) (4X5)

[20]

Q. No.	Question
1.	What are the key features of DNA Methylation?
2.	Describe the steps needed to control cell culture contamination
3.	What is the principle of Northern Blotting?
4.	Discuss reporter assays.
5.	Enumerate key features of a Ligand gated ion channel.
6.	What are the characteristics of a dose response relationship?
7.	What are the applications of microarray technology?

SECTION C

Long-type Questions. (Attempt any two questions) (2X10)

[20]

Q. No.	Question
1.	Describe the different types of passive transport.
2.	What are the important components of Cell Signaling?
3.	Discuss the applications of Computational Toxicology.
4.	Polymerase Chain Reaction and its types and importance.

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