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Course Name: B.Sc. Toxicology, Semester-II End term Examination (2022-23)

Paper Name: Methods of Toxicity Testing
Time: 2.5Hrs

Paper Code: BTX DSC 201
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 3 out of 5; Section C: Answer all the questions, each question has an internal choice

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

(Marks 1×20=20)

Q. No.	Question	Marks	BTL-	CO	PO
1.	What is the primary goal of <i>in vitro</i> testing for chemicals? a) To test chemicals in a living animal b) To test chemicals outside biological environment c) To test chemicals in biological environment d) To test chemicals in food products	1	2	1	1
2.	Which type of testing provides a more realistic understanding of how chemicals interact with complex biological systems? a) <i>In vitro</i> testing b) <i>In silico</i> testing c) <i>In vivo</i> testing d) <i>In situ</i> testing	1	1	2	1
3.	Which is a common rat species used in toxicity testing? a) <i>Rattus norvegicus</i> (Norway rat) b) <i>Mus musculus</i> (house mouse) c) <i>Rattus rattus</i> (black rat) d) <i>Cavia porcellus</i> (guinea pig)	1	1	2	1
4.	In rat models, the typical circadian rhythm for activity is with most rats being active during: a) The day (diurnal) b) The night (nocturnal)	1	2	1	1

	c) Dawn and dusk (crepuscular) d) Random times throughout the day and night				
5.	Mouse models are useful for understanding the molecular basis of diseases because: a) Mice and humans have identical DNA. b) Mice and humans share many genetic similarities. c) Mice are entirely unrelated to humans. d) Mice cannot contract diseases.	1	3	4	2
6.	Rat models play a significant role in toxicology research, particularly for assessing the safety of various substances, such as chemicals, drugs, and environmental toxins. This helps ensure: a) A steady supply of rats for research purposes. b) The growth of the fashion industry. c) Human and environmental safety. d) Advancements in space exploration.	1	1	2	1
7.	What makes rats a popular choice for research models? a) Their small size and portability b) Their long lifespan and resistance to diseases c) Their genetic similarity to humans d) Their ability to communicate with humans	1	2	1	1
8.	Which aspect of cell culture is critical to maintaining cell health and viability? a) Exposure to natural light b) Frequent changes in temperature c) Avoiding the microbial contaminants d) Use of non-sterile equipment	1	4	3	1
9.	The A549 cell line is commonly used for studying: a) Kidney toxicity b) Lung toxicity c) Gastrointestinal toxicity d) Cardiac toxicity	1	2	1	1
10.	What are cell lines commonly used in toxicological studies? a) Human cell lines b) Fungal cell lines c) Plant cell lines d) Viral cell lines	1	3	4	2
11.	In computational models of toxicity, what does QSAR stand for? a) Quantitative Structure-Activity Relationship b) Quick Screening for Acute Reactions c) Quality System for Analysis and Reporting d) Quorum Sensing and Regulatory Assessment	1	2	1	1
12.	Which of the following is a limitation of computational models in toxicity testing?	1	2	1	1