


Name:			
Enrolment No:			
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES End Semester Examination, December 2022			
Course: Animal Studies and Toxicity Assessment		Semester: III	
Program: B.Sc. (Clinical Research)		Time : 03 hrs.	
Course Code: HSCR2003		Max. Marks: 100	
Instructions: Attempt all the questions			
Q.No	Section A Short answer questions/ MCQ/T&F	(20Q x1.5M=30 Marks)	COs
Q	Attempt all the questions		CO
1.	Characteristic/s of a good bioassay is evaluated based on its a) Sensitivity b) Specificity c) Reproducibility d) All of the above	1.5	CO1
2.	Acute toxicity study lasts for a) 14 days b) 28 days b) c) 60 days d) 6 months	1.5	CO2
3.	Which of the following is chronic toxicity study guideline? a) OECD 423 b) OECD 402 c) OECD 452 d) OECD 405	1.5	CO2
4.	Which method is used in microbiological assay? a) Cylinder plate method b) Turbidimetric method b) Cup plate method d) All of the above	1.5	CO3
5.	Relative bioavailability is mostly calculated in relation to? a) Oral route b) Inhalational route c) Intravenous route d) Intraperitoneal route	1.5	CO4
6.	Distribution of drugs to organs is a parameter of a) Pharmacology b) Pharmacokinetic c) Pharmacotherapeutic d) Pharmacodynamic	1.5	CO5
7.	Which of the followings is not a Pharmacodynamic parameter a) Cmax	1.5	CO3

	b) Tmax c) AUC d) Fr		
8.	Which of the following parameters signify toxicity a) Body weight loss b) Apoptosis c) Organ damage d) All of the above	1.5	CO2
9.	Which of the followings is not obtained from dose-response curve? a) Efficacy b) Potency c) Safety d) Intensity	1.5	CO1
10.	Material mostly used for making containers a) Steel b) Glass c) Soil d) Sand	1.5	CO2
11.	What is secondary packaging? Provide example.	1.5	CO2
12.	Which animal is chosen for the bioassay of digitalis?	1.5	CO1
13.	What do you understand by mutation?	1.5	CO2
14.	What is teratogenicity?	1.5	CO2
15.	Write an example of animal model.	1.5	CO2
16.	What do you understand by chromosomal rearrangements?	1.5	CO2
17.	What do you mean by stem cell/iPSC?	1.5	CO2
18.	Mention the importance of drug delivery system?	1.5	CO5
19.	Differentiate between absolute bioavailability and relative bioavailability?	1.5	CO4
20.	What is the full form of LAL test?	1.5	CO3
	Section B	(4Qx5M=20 Marks)	CO
Q	Attempt all the questions		
1.	Write a note on mutagenicity and teratogenicity with examples.	5	CO2

2.	What are the various requirements for housing conditions in animal experimentation. Explain.	5	CO2
3.	What is acute, subacute, sub chronic and chronic toxicity? Provide examples.	5	CO2
4.	Discuss about LAL test and rabbit test.	5	CO3
Section C		(2Qx15M=30 Marks)	
Q	Attempt all the questions (Case studies)		CO
1.	<p>Background: In a bioassay, the response is proportional to the dose and the response may lie between no response and the maximum response.</p> <p>Questions:</p> <ol style="list-style-type: none"> 1. What type of bioassay is this? Explain. 2. What are the various types of bioassay of this case? 3. Draw a graph and mention their properties. 	5+5+5=15	CO3
2.	<p>Background: You are provided with a drug d-tubocurarine and advised to perform a bioassay.</p> <p>Questions:</p> <ol style="list-style-type: none"> 1. What would be the principle of the assay? Explain. 2. How would you prepare standard and test sample and what are the requirements for the assay? 3. How would follow the procedure step by step for the completion of the assay? 	5+5+5=15	CO4
Section D		(2Qx10M=20 Marks)	
Q	Attempt all the questions		CO
1.	What are plasma level and urinary excretion methods? Elaborate. What are the various other biological fluids used for determining bioavailability?	10	CO4
2.	What is pyrogenicity and how depyrogenation can be done? Discuss the details about pyrogens sources, classification, and properties of pyrogens and endotoxins.	10	CO3