

**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034****M.Sc. DEGREE EXAMINATION – ZOOLOGY****THIRD SEMESTER – NOVEMBER 2023****PZO3MC03 – TOXICOLOGY, PHARMACOLOGY AND BIOETHICS**

Date: 04-11-2023

Dept. No. 

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

**SECTION A – K1 (CO1)****Answer ALL the questions****(5 x 1 = 5)****1 Definitions**

- a) Biomagnification.  
 b) Threshold dose.  
 c) Secondary Poisoning.  
 d) Pharmacodynamics.  
 e) Mucolytics.

**SECTION A – K2 (CO1)****Answer ALL the questions****(5 x 1 = 5)****2 Fill in the blanks**

- a) An example for harmful algal bloom \_\_\_\_\_.
- b) \_\_\_\_\_ is a motor protein, is responsible for carrying vesicles and other cargoes containing essential materials along microtubules in the anterograde direction.
- c) \_\_\_\_\_ plays a crucial role in determining safe exposure levels and setting regulatory standards for toxic substances.
- d) The lowest dose at which adverse effects are observed in animal studies and helps in determining the threshold of safety concerns is known as \_\_\_\_\_.
- e) The development of humanized mouse models has significantly contributed to the field of \_\_\_\_\_ research.

**SECTION B – K3 (CO2)****Answer any THREE of the following****(3 x 10 = 30)**

- 3 Enumerate the diverse branches of toxicology.
- 4 Describe different neuronopathies with examples.
- 5 Describe the key components and objectives of toxicity risk assessment.
- 6 Explain how toxicants can harm human through direct contact.
- 7 Describe the factors affecting the nature and pharmacological responses.

**SECTION C – K4 (CO3)****Answer any TWO of the following****(2 x 12.5 = 25)**

- 8 Classify toxic agents with an example.
- 9 Examine the intricate mechanisms of drug resistance in bacteria.
- 10 Determine any three toxicology testing techniques.
- 11 Examine the ethical dilemmas and considerations associated with the use of animal models in scientific research.

**SECTION D – K5 (CO4)**

**Answer any ONE of the following** **(1 x 15 = 15)**

12 Explore the mechanisms by which xenobiotics can be metabolized and detoxified in living organisms.

13 'Neurotoxic substances disrupt a neuron's normal functions' Justify.

**SECTION E – K6 (CO5)**

**Answer any ONE of the following** **(1 x 20 = 20)**

14 Discuss the multifaceted aspects of chemotherapy as a vital cancer treatment modality.

15 Collate the different routes of administration of drugs.

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