



**RAJARATA UNIVERSITY OF SRI LANKA  
FACULTY OF APPLIED SCIENCES**

**B.Sc. Honours in Applied Biology  
Third year – Semester II Examination – July 2020**

**BIO 3205 – ECOTOXICOLOGY**

**Time: Two (02) hours**

**Answer ALL questions.**

1. a) What are the factors that determine the number of animals to be tested in an experiment to investigate toxicity of a compound? **(25 marks)**  
 b) Design an experiment to determine the effects of acute and chronic toxicity of Pyrethroids on the Asian common toad, *Bufo melanostictus*. **(75 marks)**
2. a) “Metalloids and metals located in the same region of the periodic table show a tendency to form covalent bonds”. Using the metal mercury (Hg) as an example, discuss the importance of the above statement in relation to ecotoxicology. **(80 marks)**  
 b) Differentiate between the terms bioaccumulation and biomagnification using DDT as an example. **(20 marks)**
3. Write an account on “bioavailability” in ecotoxicology. **(100 marks)**
4. a) Write a brief account on xenobiotic metabolism. **(35 marks)**  
 b) Explain the biochemical effects of radioactive isotopes on humans, using the Chernobyl disaster as an example. **(35 marks)**  
 c) Using suitable examples, state how anions act as toxic pollutants. **(30 marks)**

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