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Total No. of Questions : 16 ]

[ Total No. of Printed Pages : 3

# **SEME-212**

**M.Sc. (IInd Semester) Examination, 2022**

**ENVIRONMENTAL SCIENCE**

Paper - FS-ENV-CC-204

**(Environmental Toxicology)**

*Time : 1½ Hours ]*

*[ Maximum Marks : 40*

*Note :-* The question paper contains three Sections.

**Section-A** (Marks : 1 × 10 = 10)

*Note :-* Answer all the *ten* questions (Answer limit **50** words). Each question carries **1** mark.

**Section-B** (Marks : 3 × 5 = 15)

*Note :-* Answer any *five* questions by selecting at least *one* question from each Unit (Answer limit **200** words). Each question carries **3** marks.

**Section-C** (Marks : 5 × 3 = 15)

*Note :-* Answer any *three* questions by selecting *one* question from each Unit (Answer limit **500** words). Each question carries **5** marks.

**Section-A**

1. (i) Who is the author of the book 'the Silent Spring' ?
- (ii) What is the chemical formula of PAN ?

**BI-277**

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**SEME-212** P.T.O.

- (iii) Define Biomagnification.
- (iv) What do you understand by Byssinosis ?
- (v) Define LD50 and LC50.
- (vi) Expand OSHA.
- (vii) What do you understand by the term Biomarker.
- (viii) What is a Bioassay ?
- (ix) Name few bioindicators of water pollution.
- (x) Differentiate between hazard and danger.

### **Section-B**

#### **Unit-I**

- 2. Write the chemical reactions that take place during the formation of photo-chemical smog.
- 3. Define POP's. Name a few POP's and the problems associated with them.
- 4. Differentiate between bioconcentration and bioaccumulation.

#### **Unit-II**

- 5. How is the health protection of workers is ensured in any occupation ?
- 6. What are the reasons of lead poisoning at workplace ?
- 7. Differentiate between anthracosis and asbestosis.

#### **Unit-III**

- 8. Differentiate between acute and chronic toxicity. Give suitable examples.
- 9. Discuss about irreversible and reversible toxicity caused by chemicals using suitable examples.
- 10. Differentiate between *in-vivo*, *in-vitro* and *in-silico* tests used in toxicity studies.

## **Section–C**

### **Unit–I**

11. Write a short note on Carcinogens in the air.
12. Discuss any case study on radiation toxicity of your choice.

### **Unit–II**

13. Discuss the role of WHO in occupational health safety.
14. Elaborate the occupation health status in India in your own words.

### **Unit–III**

15. Pointwise elaborate the risks and effects of any contaminant during their transfer in a food chain.
16. Briefly discuss the role of environmental toxicology in the discipline of environmental health in terms of its scope.