

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2014**Sixth Semester****Choice Based Core Course—ENVIRONMENTAL CHEMISTRY**

(Common for B.Sc. Chemistry Model I, Model II and B.Sc. Petrochemicals and
B.Sc. Chemistry Environment and Water Management)

Time : Three Hours

Maximum Weight : 25

Part A*Answer all questions.**Each bunch of four questions carries a weight of 1.*

- I. 1 Gasoline blended with up to 20% ethanol is called _____.
2 _____ is an example for non-conventional energy source.
3 The science of the study of toxic chemicals and their modes of action is called _____.
4 _____ are effective enzyme inhibitors.
- II. 5 "Ouch ouch" disease is due to _____.
6 The Instrumental technique used for the determination of Co air pollutant is _____.
7 _____ is an example for nuclear incident.
8 The TLV value for MIC is _____.
- III. 9 The optimum D.O. in natural water is _____ PPM.
10 Thermal pollution are associated with _____.
11 The degree of microbially mediated O_2 consumption water is known as the _____.
12 Excessive algal growth in water is called _____.
13 Calcium deficient soils are generally treated with _____.
14 Most abundant organic component in soil is _____.
15 Magnesium is made available to plants through _____ process.
16 Crop fertilizers contain _____ as major components.

 $(4 \times 1 = 4)$

Turn over

Part B

Answer any five questions.

Each question carries a weight of 1.

- 17 What is meant by non-renewable energy ? Give example.
- 18 Give biochemical effects of PAN.
- 19 Give names of *four* toxic chemicals in the environment.
- 20 What are the consequences of acid rain ?
- 21 What is Photochemical smog ?
- 22 Explain what is COD ?
- 23 Explain the macronutrients present in the soil.
- 24 Discuss the inorganic components of the soil.

(5 × 1 = 5)

Part C

Answer any four questions.

Each carries a weight of 2

- 25 Write short notes on solar energy.
- 26 Briefly explain the impact of toxic chemicals on enzymes.
- 27 What are primary air pollutant ? Discuss their sources.
- 28 What are the factors responsible for ozone depletion ?
- 29 How is DO and BOD of a water sample determined ?
- 30 Discuss the different modes of waste disposal.

(4 × 2 = 8)

Part D

Answer any two questions.

Each question carries a weight of 4.

- 31 Describe the methods used for the estimation of the following water quality parameter.
(a) Coliform ; (b) Phosphate ; (c) Fluoride ; and (d) Cyanide.
- 32 Write an essay on measurement, classification and hazards of noise pollution.
- 33 Briefly explain (a) management of solid waste ; (b) Reactions in soil.

(2 × 4 = 8)