

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2013

(CCSS)

Chemistry—Open Course

CH 5D 01—ENVIRONMENTAL CHEMISTRY

Time : Three Hours

Maximum : 30 Weightage

I. Answer *all* questions. Each question carries a weightage of $\frac{1}{4}$:

- 1 _____ denotes the realm of living organism and their interaction with the environment.
(Fill up the blank)
- 2 Thermosphere is at an altitude of _____ km. (Fill up the blank)
- 3 _____ is the source of lead particles in the atmosphere. (Fill up the blank)
- 4 Which one of the following is not a greenhouse gas :
(a) Methane. (b) CFC.
(c) N_2O . (d) N_2 .
- 5 Write one example of **microbially mediated redox** reaction in water.
- 6 Name one **organochlorine** insecticide.
- 7 Winkler's method is used for determination of _____
- 8 _____ method is used for the determination of ammonia in water.
- 9 **Flameless** Atomic Absorption method is used for the determination of _____ in water.
- 10 Hardness of water is determined by **titrimetry** using _____ reagent.
- 11 What is PAN ?
- 12 The pollutant involved in **Bhopal tragedy** was _____

(12 x $\frac{1}{4}$ = 3 weightage)

II. Answer the following. Each question carries a weightage of 1 :

- 13 How would you divide **the major regions of atmosphere** ? **Explain.**
- 14 **Illustrate carbon cycle.**
- 15 **Explain the working of a "Three way" catalyst.**
- 16 **How is SO_2 determined ? Explain.**
- 17 **What is "eutrophication" ? Explain.**
- 18 **Explain the biochemical effect of CO .**

Turn over

19 What is **SPM** ? How does it pollute environment ?

20 List the water quality standards for drinking.

21 Name the refrigerants other than CFC. Explain functioning of 'one' of them.

(9 x 1 = 9 weightage)

III. Answer any *five* questions. Each question carries a **weightage** of 2 :

22 Explain the role of a "wet scrubber" in pollution control.

23 How is CO₂ content in air estimated ? Explain.

24 How is fluoride in air detected and estimated ? Explain.

25 Write a note on biological magnification.

26 How does thermal pollution originate ? Explain.

27 Write a note on anthropogenic impacts on environment.

28 Briefly explain ion exchange method of waste water treatment.

(5 x 2 = 10 weightage)

IV. Answer any *two* questions. Each question carries a **weightage** of 4 :

29 Write a brief account of the various air pollutant monitoring methods.

30 What are the sources of water pollution ? Discuss.

31 What are the sources of pesticide pollution in Kerala ? Suggest methods to minimize pesticide pollution.

(2 x 4 = 8 weightage)