

5. (a) What are Green House Gases ? Discuss
in detail Green House Effect. 8
- (b) Write note on global warming. 7

Unit III

6. (a) Discuss formation soil horizons and their
characteristics. 10
- (b) Define micronutrients and macronutrients.
5
7. Explain, how the following soil characteristics
vary with depth ?
- (a) Structure
- (b) Texture
- (c) Colour
- (d) Porosity
- (e) Bulk density. 15

M-18AA2103

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Roll No.

18AA2103

M.Sc. EXAMINATION, May 2019

(First Semester)

(C Scheme) (Re-appear)

ENVIRONMENTAL SCIENCE

ES505C

ENVIRONMENTAL CHEMISTRY

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit.

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P.T.O.

1. (a) Source of NO_x and SO_x in stratosphere is. 2
- (b) What do you mean by good ozone and bad ozone ? Where they exist in atmosphere ? 2
- (c) Name the six criteria pollutants. 1
- (d) How soils air is different than atmospheric air ? 2
- (e) What do you mean by “tragedy of commons” in environmental pollution ? 2
- (f) How will you prepare 0.5 N solution of NaOH ? 2
- (g) Define solubility product. 2
- (h) List general options for the control of acid rain. 2

Unit I

2. (a) Calculate the hydroxide ion concentration of a solution if its pH is 6. 2
- (b) Define free radical. 2
- (c) Define oxidation and reduction process. 4
- (d) Explain Common Ion Effect. 3
- (e) Define electrochemical cell and electrolytic cell. 4
3. (a) Define bond. Explain various types of bond. 10
- (b) What are six most common chemical indicator of water quality ? 5

Unit II

4. What is Photochemical Smog ? What are various conditions required for formation of photochemical smog ? Write various reactions involved in it. 15

Unit IV

8. (a) Explain the process of eutrophication with sources and its effect. **5**
- (b) Why is the pH of sea water constant at 8 ± 2 ? **5**
- (c) Sketch a neat labelled diagram of rapid sand filter ? **5**
9. Write short notes on the following :
- (a) BOD
- (b) COD
- (c) DO. **15**

Unit IV

8. (a) Explain the process of eutrophication with sources and its effect. **5**
- (b) Why is the pH of sea water constant at 8 ± 2 ? **5**
- (c) Sketch a neat labelled diagram of rapid sand filter ? **5**
9. Write short notes on the following :
- (a) BOD
- (b) COD
- (c) DO. **15**