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NTK/KW/15–5843

Third Semester B. Sc. (Part - II) Examination

ENVIRONMENTAL SCIENCE

Paper - V

(Environmental Chemistry and Instrumentations)

Time : Three Hours] [Max. Marks : 50

N. B. : (1) All questions are compulsory.
(2) All questions carry equal marks.

1. Discuss the chemical properties of water w.r.t. solubility of oxygen, carbon-dioxide and nitrogen.

OR

(a) What are the different types of subsurface water?

(b) What are the different reasons for conflicts over water ?

2. Discuss catalytic and noncatalytic destruction of ozone layer? What are the impacts of ozone hole ?

OR

(a) Write an informative note on green house gases and contribution of these gases to global warming.

(b) Explain the process of green house effect.

3. Classify instrumental methods. Explain the theory of turbidometry.

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OR

(a) Briefly explain the method for the measurement of pH.

(b) How redox potential is measured ?

4. What is stationary and mobile phase ? Discuss the principle of gas chromatography.

OR

(a) Explain the principle of thin layer chromatography((TLC).

(b) State Lambert's and Beer's law.

5. Answer any **ten** :—

(i) Define salinity.

(ii) Define thermal conductivity.

(iii) What is the chemical composition of sea water ?

(iv) What are the trace elements in the atmosphere ?

(v) Mention the different stages of ozone cycle.

(vi) What are chlorofluoro carbons (CFCs) ?

(vii) What are the factors affecting the turbidity measurement ?

(viii) Name the different types of electrodes in pH meter.

(ix) What is the unit of conductivity ?

(x) What are the applications of paper chromatography ?

(xi) What are the various components of flame photometer ?

(xii) What do you understand by retension factor ?

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