

**Ph.D. ENVIRONMENTAL SCIENCE
(PHDEV)**

Term-End Examination

December, 2018

REVE-001 : ENVIRONMENTAL CHEMISTRY

Time : 3 hours

Maximum Marks : 100

Note : (i) All questions carry equal marks.

(ii) Answer any five.

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| 1. | (a) Discuss the environmental sampling methods and their suitability in Environmental research. | 10 |
| | (b) Discuss various analytical technologies used in the environmental research. | 10 |
| 2. | Explain environmentally benign solvents. Describe the role of water as a solvent. | 20 |
| 3. | What is green chemistry ? Explain the principles of Green Chemistry with suitable examples. | 20 |
| 4. | Explain the method of purification of water using ion-exchange resins. | 20 |
| 5. | Explain the principle and the process of Nephelometry. | 20 |
| 6. | Write a note on detectors used in HPLC and write the advantages of HPLC with suitable examples. | 20 |
| 7. | Explain the principle of AAS and justify the advantages of AAS over FES. | 20 |
| 8. | Describe the components of gas chromatography and write its applications in environmental research. | 20 |