

M.Sc. (Part-I) (Environmental Science) (NEP Pattern) Semester-II
PMENVT08 - Major : Analytical Techniques for Environmental Monitoring

P. Pages : 1

Time : Three Hours



GUG/S/25/15383

Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Illustrate the answers with suitable diagrams and examples.

1. Describe with a schematic diagram, functions of different components of gas chromatography. **16**
- OR**
- a) Discuss classification of chromatographic separations. **8**
- b) Describe thin layer chromatography technique. **8**
2. Describe construction and working of atomic absorption spectrophotometer with neat diagram. **16**
- OR**
- a) Explain briefly the principle and working of flame photometer. **8**
- b) Discuss the working and applications of infrared spectroscopy. **8**
3. Define Ion Selective Electrodes. State their basic principle. Explain the measurement methods with this electrode. **16**
- OR**
- a) Describe instrumentation and applications of polarography in Environmental chemical analysis. **8**
- b) How redox potential is measured? Give its significance in Environmental monitoring. **8**
4. What are errors? Give the types of errors and explain it. How errors Can be minimized? **16**
- OR**
- a) Describe in brief x-ray diffraction method. **8**
- b) Discuss mean, mode and median with example. **8**
5. a) Write a note on stationary and mobile phases in paper chromatography. **4**
- b) Explain in brief nuclear magnetic resonance. **4**
- c) Discuss the applications of heavy metals like Cu in natural water system. **4**
- d) Discuss the applications of radiochemical analysis. **4**
