



Indira Gandhi National Tribal University, Amarkantak (M.P.)

Semester End Examination, January-2021

Department of Environmental Science

M. Sc. - III Semester

Paper: Instrumentation and analytical techniques in environmental science

Paper Code - EST 303

Time Allowed: 2 Hours

Maximum Marks: 60

Note: Attempt all the questions as directed.

Attempt any five questions. Each question carries 12 marks.

1. Briefly describe the working of a fluorescent microscope with a sketch a well labeled diagram? State the applications of fluorescent microscope
2. Describe in detail the principle, working and applications of a UV-Visible spectrophotometer?
3. Define Chromatography and its applications? Briefly describe thin layer chromatography
4. Explain the working and application of Scanning electron microscope and explain the specimen preparation for electron microscopy.
5. What do you mean by agarose gel electrophoresis? Briefly explain agarose gel electrophoresis?
6. Why it is important to assess the quality of air? Briefly describe the sampling and analysis techniques and application associated with air quality sampling?
7. Describe the principle, functioning and application of GC-MS
8. Describe the principle, functioning and application of NMR?
9. Define chromatographic technique and explain the principle of column chromatography with well labeled diagram?
10. Briefly describe how analytical techniques play an important role in the study of environmental sciences?
