

Code: R7411003

B.Tech IV Year I Semester (R07) Supplementary Examinations December 2015

ANALYTICAL INSTRUMENTATION

(Electronics & Instrumentation Engineering)

(For 2008 regular admitted batch only)

Time: 3 hours

Max. Marks: 80

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain with a neat figure the function of a sodium analyzer.
(b) Write short notes on silica analyzer.
- 2 (a) Discuss the working of industrial analyzers.
(b) What are the applications of CO analyzer and write short notes on the method followed?
- 3 (a) Explain the principle of operation of gas chromatography.
(b) List the application of liquid chromatography.
- 4 (a) What do you understand by adsorption chromatography & partition chromatography?
(b) Explain the Beckman paramagnetic oxygen analyzer with neat diagram.
- 5 (a) Explain in detail the construction and working principle of IR spectrometer.
(b) What is the necessity of using internal standards in spectrometric analysis?
- 6 (a) Draw and explain the differential flame ionization detector.
(b) Write short notes on ESR.
- 7 (a) With neat block diagram, explain about the constructional details of NMR spectrometer.
(b) Write short notes on the principle of operation of surface barrier detector.
- 8 Explain in detail the construction and working principle of any two types of radiation detectors with a neat diagram.
