

44822



Name : .....

Reg. No: .....

**EIGHTH SEMESTER B.TECH (SUPPLEMENTARY) DEGREE EXAMINATION, JUNE 2013**

**AI 04 802 – ANALYTICAL INSTRUMENTATION  
(2004 Scheme)**

**Time : Three Hours**

**Maximum : 100 Marks**

**Part A**

1. Briefly explain the interaction of Electromagnetic radiation with matter.
2. What is the significance of microprocessors in Photometry?
3. What are the types of radiation sources?
4. What is thermal analysis? Explain.
5. Explain the principle of x-rays.
6. What is nuclear magnetic resonance?
7. What are chromatographic detectors? Explain.
8. Explain the working of an Oxygen analyser?

(8 x 5 = 40 Marks)

**Part B**

9. (a) Explain spectral analysis and its significance in Instrumentation.  
(Or)  
(b) Explain the various blocks of spectrophotometry.
10. (a) Explain the working of Infrared spectrophotometer.  
(Or)  
(b) Explain the working of  
(i) Atomic emission spectrometry  
(ii) Atomic absorption spectrometry.
11. (a) Explain the principle and working of Fluorescence spectrometer.  
(Or)  
(b) Explain ESR Spectrometer.
12. (a) Explain the working of Magnetic deflection type mass spectrometry.  
(Or)  
(b) Explain the principle and working of  
(i) Co monitor  
(ii) Industrial Analyser

(4 x 15 = 60 Marks)

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