

Code :R7411003

R7

IV B.Tech I Semester(R07) Supplementary Examinations, May/June 2011

**ANALYTICAL INSTRUMENTATION**  
(Electronics & Instrumentation Engineering)

Time: 3 hours

Max Marks: 80

**Answer any FIVE questions**  
**All questions carry equal marks**

\*\*\*\*\*

1. (a) Explain in detail about the principle and operation of a PH meter.  
(b) Explain about silica analyzer.
2. Write short notes on:
  - (a) H<sub>2</sub>s analyzer system
  - (b) Co monitor system.
3. With the help of a neat schematic diagram explain the principle of operation of a liquid chromatography.
4. (a) Explain Beckman paramagnetic O<sub>2</sub> analyzer.  
(b) Explain Hot wire anemometer oxygen analyzer.
5. Explain with a schematic diagram, the instrumentation in a double beam and single beam IR spectrophotometer.
6. (a) Explain the operation of absorption spectrometer.  
(b) Explain the flame photometers.
7. (a) Explain the theory of non-magnetic resonance and electro spin resonance.  
(b) Mention the few applications of mass spectrometer.
8. Explain any two types of Nuclear radiation detectors.

\*\*\*\*\*