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BOARD DIPLOMA EXAMINATION
MARCH/APRIL - 2019
DIPLOMA IN APPLIED ELECTRONICS AND INSTRUMENTATION
ANALYTICAL INSTRUMENTATION
FOURTH SEMESTER EXAMINATION

Time: 3 Hours **Total Marks: 80**

PART - A (3m x 10 = 30m)

Note 1:Answer all questions and each question carries 3 marks

2:Answers should be brief and straight to the point and shall not exceed 5 simple sentences

1. Draw electromagnetic spectrum
2. Define spectroscopy
3. List any three applications of Polarimeter.
4. State the principle of Flame photometer
5. Define the Resolution of mass spectrometer
6. Draw the block diagram of single deflection 180^0 mass spectrometer
7. List the applications of liquid chromatography
8. Define chromatography.
9. Draw the block diagram of conductivity meter
10. List the types of radiations

PART - B (10m x 5 = 50m)

Note 1:Answer any five questions and each carries 10 marks

2:The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer

11. Explain the principle of operation and applications of UV spectrophotometer
12. Mention the different types of light sources and light detectors of visible, UV and IR
13. Explain the principle of operation and applications of Paramagnetic gas analyzer
14. Explain the principle of operation and applications of Auto analyzer

15. Explain the block diagram of mass spectrometer

16. Explain the principle of operation and applications of gas chromatography with diagram

17. Explain the measuring and reference electrodes used for PH measurement

18. Explain the working of Scintillation counter detection method with diagram

- xxx -