



C16-AEI-404

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BOARD DIPLOMA EXAMINATION, (C-16)
MARCH/APRIL—2018
DAEI-FOURTH SEMESTER EXAMINATION

ANALYTICAL INSTRUMENTATION

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed **five** simple sentences.

1. Define spectroscopy.
2. Draw the block diagram of electromagnetic spectrum.
3. Draw the block diagram of refractometer.
4. List any three applications of auto analyzer.
5. Define the resolution of mass spectrometer.
6. List the applications of mass spectrometer.
7. Differentiate between the terms absorption and adsorption.
8. Classify chromatography.

* 9. State the importance of pH.

10. List the types of radiation.

PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain the principle of operation of UV spectrophotometer with diagram.

12. Explain the block diagram of analytical instrumentation.

13. Explain the principle of operation of flame photometer with diagram.

14. Explain the principle of operation of paramagnetic gas analyzer.

15. Explain the block diagram of mass spectrometer.

16. Explain the principle of operation of liquid chromatography with diagram.

17. Explain the principle of operation of conductivity meter with diagram.

* 18. Explain the working of Geiger-Muller detection method with diagram.
