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Question Paper

Exam Date & Time: 28 Mar 2021 (9:30 am to 12:30 pm)

MANIPAL ACADEMY OF HIGHER EDUCATION
Instrumental Methods of Analysis [PQA-BP701T]
Marks: 75 Duration: 180 mins.

Sections Duration: 150 min (10 am to 12:30 pm)

II Long Answers

Answer all the questions.

- 1) A. Enlist the factors that alter the signal while analyte concentration is kept constant in Atomic absorption spectroscopy. (5M) (10)
 B. Explain the background correction technique used when atoms at electronic energy level split resulting several absorption lines. (5M)
- 2) What are the ideal characteristics of a GC detector? Explain the working of thermal conductivity detector. (10)

III Short Answers

Answer all the questions. (5 marks each)

- 1) Enlist and explain the types of shifts observed in UV-spectrum with suitable examples. (5)
- 2) Write a note on factors affecting fluorescence. (5)
- 3) Write the relevance of Hooke's law in IR spectroscopy with suitable example. (5)
- 4) Explain band broadening by Van Deemter Equation. (5)
- 5) What is electrophoresis? Enlist the types of development of electrophoresis and explain any one in detail. (5)
- 6) Explain the types of currents in polarography. (5)
- 7) Discuss the types of amperometric titrations. (5)