Q.P. CODE : 7891

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary. Answer **FOUR** questions

ANSWER ANY FOUR   **4 X 25 = 100 Marks**

1. a) An aromatic compound $C_7 H_9 N$ has absorption bands at these wave numbers:
    3520, 3430, 3030, 2925, 1588, 1494, 1471, 1303, 1268 and 748 cm^{-1}. Deduce its structure

    b) Give an account on the types of Mass spectrometers

2. a) Enlist the factors affecting column performance in liquid chromatography. Describe how
    column performance is optimized.

    b) Give the applications of paper electrophoresis in pharmacy

3. a) Discuss in detail the instrumentation and applications of GLC technique

    b) What is McLafferty's Rearrangement? Give its applications with suitable examples

4. a) What is NMR Spectroscopy? Give a brief account on the applications of PNMR

    b) Give the details of quantitative analysis using IR spectroscopy

5. a) Give the outline of the instrumentation in X-ray powder diffraction. Also explain Bragg's law
    and how X-rays could be generated?

    b) What is HPLC? Give its applications in pharmacy. Explain how it is more useful than the
    conventional chromatographic methods

6. a) Explain the derivatisation methods of gas chromatography.

    b) Discuss Bonded phase supports

    c) Write a note on HPTLC

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