(LR 4270) DECEMBER 2020 **Sub. Code: 4270**

(AUGUST 2020 SESSION)

B.PHARM. DEGREE EXAMINATION
FOURTH YEAR
PAPER IV – MODERN METHODS OF PHARMACEUTICAL ANALYSIS

Q.P. Code: 564270

Time: Three hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. a) What is Ion exchange chromatography.
   b) What are the different types of exchangers?
   c) Explain in detail the mechanism of Ion exchange.

2. a) Explain the principle and instrumentation of Fuorimetry.
   b) What are the factors that influence Fluorescence? Explain with examples.

II. Write notes on: **(8 x 5 = 40)**

1. In polarography what is half wave potential? explain.
2. Draw the proton NMR spectrum of 1,3 – dibromopropane showing the number of signals, their relative positions and splitting of signals.
3. Describe a typical IR spectrum. Include information about vertical and horizontal axes and the broad regions. Where would you expect the absorption to occur for benzene?
4. What are the methods of detection in thin layer chromatography?
5. Describe the construction and working of a calomel electrode.
6. Enumerate the different methods of ionization in mass spectrometry. Explain any one metho
7. Explain the basic concepts of good laboratory practices?
8. Briefly explain the calibration of UV Spectrophotomete

III. Short answers on: **(10 x 2 = 20)**

1. Give two methods of preparation of a sample for IR spectroscopy.
2. In Polarography, why is potassium chloride solution used as supporting electrolyte?
3. What is the role of a salt Bridge?
4. Enumerate the principles of total quality.
5. What is Zeta Potential?
6. Draw the graph for a Conductometric titration of a weak acid with a strong base.
7. Distinguish between calibration and validation.
8. What are indicator electrodes? Give one example.
9. Distinguish between Accuracy and Precision.
10. What are the electrodes used in Polarography?

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