

(LQ 4270)

FEBRUARY 2020

Sub. Code: 4270

**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) Explain different types of electronic transitions.  
b) Define Auxochrome and Chromophore with examples.  
c) What is Frank codon principle explain?  
d) Compare Double beam and Single beam spectrophotometer.
2. a) Outline the basic instrumentation of High Performance Liquid chromatography.  
b) Define Relative Retention and Retention Index.  
c) Describe different type of development techniques and methods used to locate the spots in paper chromatography.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Write different mass analysers used in Mass Spectrometry.
2. Give Bragg's equation and explain.
3. Explain about Monochromator.
4. Explain the term Quenching.
5. Explain Shielding and de-shielding spin coupling in NMR spectroscopy.
6. Write note on ESR.
7. Write applications of mass spectroscopy.
8. Rheodyne.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Define absorption maxima.
2. Define Base peak.
3. Expand ISO.
4. What is molecular ion peak?
5. Name different currents observed in Polarogram.
6. Define Fluorescence.
7. Define Limiting Current.
8. What is Chemical shift in NMR?
9. Define Beer Lamberts Law.
10. Define absorptivity.

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