

MODERN PHARMACEUTICAL ANALYSIS (OS & RS)**Q.P. CODE: 7891**

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary. Answer **FOUR** questions**LONG ESSAYS (ANSWER ANY FOUR)****4 X 25 = 100 Marks**

1.
 - a) Discuss the principles underlying IR absorption spectroscopy.
 - b) Discuss the theory of UV-visible spectroscopy.
2. Write briefly on:
 - a) Spin-spin coupling
 - b) Nuclear Overhauser effect
 - c) ^{13}C NMR – spectroscopy
 - d) Decoupling
3. Give an account on:
 - a) Factors affecting electrophoresis
 - b) X – ray powder diffractometer
 - c) Student's 'T' test
 - d) Optical rotatory dispersion
4. What is the principle involved in mass spectrometry? Write about the different types of ions produced in a mass spectrometer. What are general rules of fragmentation patterns in mass spectrometry?
5. Explain briefly about:
 - a) Wood ward rule and its application
 - b) Zone electrophoresis
 - c) HPTLC
 - d) Detectors used in gas chromatography
6. Write about:
 - a) Chemical shift
 - b) Octant rule and its applications

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