



Advanced Instrumental Analysis -II

Q.P. CODE: 5149

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

LONG ESSAY (Answer any Three)

3 X 10 = 30 Marks

1. Define Mass Fragmentation. Explain all the Fragmentation rules with examples
2. Define EC-MS. Discuss principle instrumentation and applications of EC-MS.
3. What are the advantages of 2-D NMR over 1-D NMR? Short note on NOESY and HECTOR.
4. Describe ATR-IR technique and Wood-Ward Fieser rule for butadienes.

SHORT ESSAY (Answer any Nine)

9 X 5 = 45 Marks

5. Explain how TGA is used in qualitative and quantitative determinations.
6. Explain in detail ring rule and isotopic peaks.
7. Explain in detail about high-performance thin layer chromatography.
8. Give the interpretation of any five organic functional groups by IR spectroscopy.
9. Determination of rotation of optical activity by octant rule in ORD.
10. Add a note on meta stable and isotopic peaks in MS.
11. Discuss the RIA techniques.
12. Add a note on Flash Chromatography.
13. Discuss in detail LC-MS interface.
14. Describe the importance and applications of DSC.

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