

Rajiv Gandhi University of Health Sciences, Karnataka
First Semester M. Pharm Degree Examination - 29-May-2023

[Time: 3 Hours]

[Max. Marks: 75]

Modern Pharmaceutical Analytical Techniques

Q.P. CODE: 5101

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

Answer All The Questions

10 X 7.5 = 75 Marks

1. Discuss the carrier gases and sample injection techniques in GC. Explain the ideal characteristics of detectors used in GC.
2. Mention the radiation sources and describe various sample handling techniques of IR spectroscopy.
3. Explain the principle and working of filters, monochromators and detectors used in UV-Visible spectroscopy.
4. Give an account on ^{13}C -NMR techniques. Enlist the solvent requirements in NMR.
5. Describe the fragmentation rules in MS.
6. Enlist and explain various Ionization techniques employed in Mass spectroscopy.
7. Define X-ray diffraction. State and derive Bragg's Law. Enlist the applications of X-ray diffraction.
8. Discuss the principle, instrumentation and applications of Ion-Exchange chromatography.
9. Define Electro Osmotic flow. Explain the instrumentation and applications of Gel Electrophoresis.
10. Explain the bounded – phases column with examples. Describe the construction and working of any two detectors used in HPLC.

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