

Rajiv Gandhi University of Health Sciences, Karnataka

First Semester M. Pharm Degree Examination - 01-Dec-2020

Time: Three Hours

Max. Marks: 75 Marks

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 importance of Woodward's rules in calculating the $\lambda_{\max}$ and absorption phenomenon of organic molecules.
2. Write a note on coupling and decoupling methods in NMR spectroscopy.
3. State the basic principles of mass spectrometry. Explain the Mc-Lafferty rearrangement.
4. What is theoretical plate, HETP, resolution and asymmetry factor? Explain the column selection in HPLC.
5. Write the principles of IR Spectroscopy and discuss the factors affecting the vibrational frequencies.
6. Explain the principles and instrument of flame emission spectroscopic technique.
7. Write a note on Bioluminescence assays. Enlist the applications of ELISA.
8. Give a brief outline of principle of FT-NMR and C^{13} NMR.
9. Define chemical shift. Explain nuclear overhauser effect.
10. Explain the practical steps and applications of ion-exchange chromatography.

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