

Rajiv Gandhi University of Health Sciences, Karnataka
III Year Pharm-D Degree Examination – 12-Nov-2021

Time: Three Hours

Max. Marks: 70 Marks

PHARMACEUTICAL ANALYSIS (RS & RS2)

Q.P. CODE: 2862

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

2 x 10 = 20 Marks

LONG ESSAYS (answer any two)

1. Describe the construction and working of a Gas Chromatography? Emphasize on the ideal characteristics of stationary phases and mobile phases used in Gas Liquid Chromatography.
2. Outline the working of a double beam recording of UV/Visible spectrophotometer. Name each part of the system and its functioning.
3. Describe the instrumentation of I.R Spectrometry.

6 x 5 = 30 Marks

SHORT ESSAYS (answer any six)

4. Explain the different modes of fundamental vibrations occurring IR Spectroscopy.
5. Describe the principles and application of electrophoresis.
6. State and derive the mathematical expression for Beer's and Lamberts Law.
7. Explain different types of transitions occurring in absorption spectroscopy.
8. List the applications of UV/Visible Spectroscopy in pharmacy.
9. Write a short note on ORD and give its applications.
10. Briefly describe the sampling techniques in IR for the analysis of solid, liquid and gaseous samples.
11. What are the basic requirements for a nucleus to exhibit NMR phenomenon?

10 x 2 = 20 Marks

SHORT ANSWERS

12. What is natural frequency of vibration and mention different types of vibrations?
13. What is the effect of conjugation and cross conjugation on λ_{max} ?
14. What is Stoke's and Anti-stoke's fluorescence?
15. Define specific conductance and Equivalent conductance.
16. Explain why the intensity of $\pi \rightarrow \pi^*$ transition is more than that of $n \rightarrow \pi^*$ transitions.
17. List the function of filters and monochromators.
18. How is the potential selected in Amperometric titrations?
19. What are the three types of fundamental motions of molecules?
20. What are the methods of solvent degassing?
21. Define and explain "Quality Assurance"?