

Rajiv Gandhi University of Health Sciences, Karnataka

III Year Pharm-D Degree Examination – 17-Nov-2022

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

LONG ESSAYS (answer any two)

2 x 10 = 20 Marks

1. Describe the preparation, activation of plates and adsorbents used in the TLC and write its application.
2. Describe instrumentation and application of HPLC.
3. What are pharmaceutical applications of fluorimetry? How is fluorimetry more sensitive and specific than spectrophotometry?

SHORT ESSAYS (answer any six)

6 x 5 = 30 Marks

4. Explain deformation vibration in IR spectroscopy.
5. Define Validation? Classify and explain each type briefly.
6. Define chromatography? What are the principles of separations in chromatography?
7. State and derive the mathematical expression for Beer's and Lambert's Law.
8. Explain the principle underlying "Dead-Stop end point technique" and Null point potentiometry.
9. Explain with graph the conductometric titration of a mixture of weak and strong acids with alkali.
10. What is the number of Fundamental Vibration modes for linear and non-linear molecules containing 'n' atoms? Explain how these numbers are obtained.
11. What is the effect of polar and Non-polar solvent on $\pi-\pi^*$ transition of alkenes? Give one example of each case with λ_{max} and ϵ values.

SHORT ANSWERS

10 x 2 = 20 Marks

12. How do you detect the aromaticity of an unknown sample by means of its UV absorption spectrum?
13. Explain the significance of dead-stop end point potentiometry.
14. Define transmittance and absorbance in spectrometry.
15. Reasons for Deviation of Beer's law.
16. What is relationship between conductivity and specific conductivity?
17. Write various ranges of electromagnetic spectrum.
18. Define Red and Blue Shift with example.
19. What are stepwise and gradient elutions?
20. Importance of Finger prints region in IR Spectroscopy.
21. What are the advantages of Amperometric titrations over potentiometry/ conductometry?
