Rajiv Gandhi University of Health Sciences, Karnataka

III Year Pharm-D Degree Examination – 30-May-2024

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. Discuss construction and working of any two detectors used in gas chromatography with their advantages and disadvantages.
2. Explain the theory and different sampling techniques involved in I.R spectroscopy. Give the application of I.R spectroscopy.
3. State and derive the equation for Beer-Lambert's law. Give the reasons for deviation from the law.

SHORT ESSAYS (answer any six) **6 x 5 = 30 Marks**

4. Explain the factors affecting fluorescence with examples.
5. Explain the working of various HPLC detectors.
6. Classify absorbents used in column chromatography with examples.
7. Define validation. Classify and explain each type of validation in brief.
8. Outline the advantages and disadvantages of the TLC over paper chromatography.
9. Add a note on Gel Electrophoresis.
10. Define and explain the terms (a) Accuracy (b) Precision (c) Significant figure.
11. Explain the conductometric graph for the titration of mixture of strong and weak acids with alkali.

SHORT ANSWERS **10 x 2 = 20 Marks**

12. Define R_f and R_x values with their significance.
13. Give the significance of guard column in HPLC.
14. Define red and blue shift with examples.
15. What is edge effect? How to minimize it?
16. Define chromophore and auxochrome with examples.
17. What is finger print region give its significance
18. Define derivatization in gas chromatography.
19. Explain layer prewashing in HPTLC.
20. What are the factors affecting column efficiency.
21. Define ion exchange capacity.

*****