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Rajiv Gandhi University of Health Sciences, Karnataka

Fourth year B.Pharm Degree Examination – August 2010

Time: Three Hours **Max. Marks: 70 Marks**

INSTRUMENTAL & BIO-MEDICAL ANALYSIS

(Revised Scheme – 3)

Q.P. CODE: 2617

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. Explain the construction and working of an I.R. Spectrometer.
2. Give the construction and working of a Gas chromatograph. Write a note on columns used in G.C.
3. Define Beer-Lambert's law and derive an expression for Beer-Lambert's law. Give its limitations and applications.

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

4. Discuss the concept of Electrophoresis and its importance in separation of biological constituents.
5. Classify the chromatographic techniques. Write a note on Elution analysis and factors affecting the column efficiency.
6. Write the theory and principle in flame photometry.
7. Discuss the various vibration transitions in I.R. spectroscopy.
8. Give the importance of Quality Assurance and Total Quality Management in Pharmaceutical industries.
9. Write a note on Conductometric titration
10. Write the principle involved in the Ion-exchange chromatography and add a note on factors affecting ion-exchange process.
11. Define validation. Discuss the various validation processes in pharmaceutical industries.

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

12. What are red shift and blue shift?
13. How thiamine is estimated by flourimetry?
14. What is Cell-constant?
15. What is HETP? Give its importance.
16. Explain the working of Bolometer
17. Define conductivity and specific conductance.
18. List out the ideal characters of mobile phase in G.C.
19. Define isobestic point with example.
20. Differentiate between adsorption chromatography and partition chromatography.
21. Name the various adsorbents and visualizing agents used in TLC.

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