

# Rajiv Gandhi University of Health Sciences, Karnataka

## IV Year B. Pharm Degree Examination – 07-Jan-2020

**Time: Three Hours****Max. Marks: 70 Marks****INSTRUMENTAL AND BIO-MEDICAL ANALYSIS****(RS – 4)****Q.P. CODE: 2642**

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. Write a note on theory and applications of IR spectrophotometry. Explain different sampling techniques employed in IR spectroscopy.
2. Discuss the ideal properties of detectors used in GC. Write the principle and working of Electron Capture detector.
3. Describe the instrumentation and applications of HPLC.

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

4. Explain the different methods of single component analysis of a drug?
5. What is quenching? Give the reasons for quenching.
6. Describe the development techniques of thin layer chromatography.
7. Give an account of gel electrophoresis with representation of neat diagram.
8. Brief out the potentiometric titrations with their merits and demerits.
9. Discuss in brief construction and working of electrochemical cell.
10. Describe the construction and working of photo multiplier tube with neat labeled diagram.
11. Describe the construction and working of Nephelometer.

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

12. What are E band and B band?
13. What are different interferences in flame photometry?
14. Write difference between visible spectrophotometer with Nephelometer.
15. Write the difference between planar and column chromatography.
16. What is Stahal's triangle? Write its significance.
17. What is displacement analysis?
18. How do you regenerate cation and anion exchange resin?
19. Write the difference between NMR and Mass spectroscopy.
20. Write the importance of fragmentation of molecules.
21. What do you understand by validation?

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