QP Code: 721006 **Reg. No……**

Seventh Semester B. Pharm Degree Supplementary Examinations
February 2022
Instrumental Methods of Analysis

(2017 Scheme)

Time: 3 Hours **Max. Marks: 75**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw diagrams wherever necessary***

Essays **(2x10=20)**

1. Explain the principle of fluorimetry using Jablonskis diagram, explain the various deactivation processes. Explain the applications of fluorimetry.
2. Explain the construction and working of gas chromatography with a neat diagram.

Short Notes **(7x5=35)**

3. Explain the different types of electronic transitions encountered in UV spectroscopy.
4. What is • Electrophoresis • Chromophore • Auxochrome
   • Bathochromic shift • Hypsochromic shift
5. Explain the construction and working of a GOLAY Cell.
6. Explain the principle behind flame photometry.
7. Explain the term height equivalent of a theoretical plate.
8. Explain the principle, stationary and mobile phases of gel filtration chromatography.
9. Explain the principle and applications of affinity chromatography.

Answer Briefly **(10x2=20)**

10. Give two examples of cation exchange resins and two examples of anion exchange resins.
11. How will you distinguish between primary and secondary amines on an IR spectrum.
12. Give two applications of ion exchange chromatography.
13. In an IR spectrum what is the finger print region.
14. Isocratic elution.
15. Reverse phase chromatography.
16. Isoelectric focusing.
17. Give two methods of identifying the separated spots in paper chromatography.
18. Compare TLC and HPTLC on particle size parameter and thickness of stationary phase.
19. Methods for preparing TLC plates

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