Roll No. | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 13

B.Pharmacy (Sem.-7)

INSTRUMENTAL METHOD OF ANALYSIS

Subject Code : BP-701T

M.Code : 78387

Date of Examination : 12-12-2022

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

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains THREE questions carrying TEN marks each and student has to attempt any TWO questions.**
3. **SECTION-C contains NINE questions carrying FIVE marks each and student has to attempt any SEVEN questions.**

SECTION-A

1. Write briefly :

a) What is Beer and Lambert's law?

b) '*Phenol has higher absorption maxima in basic medium than in acidic medium'*. Why?

c) How hybridization affects vibrational frequency of a C-H bond?

d) Give applications of gel chromatography.

e) What makes phenanthrene a fluorescent compound but biphenyl a non-fluorescent?

f) How mobile phase flow affects chromatographic resolution of components?

g) What is migration time in electrophoresis?

h) What do you mean by affinity chromatography?

i) Explain triplet excited state of molecule, giving example.

j) Mention applications of paper chromatography.

SECTION-B

2. What is the principle of Atomic absoption spectroscopy? Discuss the components of an atomic absorption spectrophotometer. Explain its pharmaceutical applications. (10)

3. What is the principle of HPLC? Describe various detectors used in it. (10)

4. a) Discuss the various factors affecting fluorescence. (5)

   b) Discuss various detectors used in IR spectrophotometer. (5)

SECTION-C

5. Discuss instrumentation and applications of Turbidometry. (5)

6. What is Flame photometry? Discuss in detail flame atomization process. (5)

7. What is gas chromatography? Discuss various factors affecting separation by this technique. (5)

8. Discuss various factors affecting selection of appropriate buffer system for electrophoresis. (5)

9. Write a comparative account on TLC and HPTLC. (5)

10. Write an account on various types of wavelength selectors used in spectrophotometers. (5)

11. Describe instrumentation and applications of Spectrofluorimetry. (5)

12. Discuss the static quenching versus dynamic quenching. (5)

13. Using jablonski diagram explain internal conversion and external conversion. (5)

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.