

Roll No.

Total No. of Pages : 02

Total No. of Questions : 13

B.Pharmacy (Sem.-8)
ADVANCED INSTRUMENTATION TECHNIQUES

Subject Code : BP811ET

M.Code : 79774

Date of Examination : 18-07-22

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) Write the importance of Radioimmuno Assay.
- (b) What is Chemical shift? Write its significance.
- (c) What is HPTLC-MS?
- (d) Give applications of TGA.
- (e) Enlist the USFDA guidelines.
- (f) What is chemical ionization?
- (g) What is FAB?
- (h) Write about analyzer quadrupole.
- (i) Explain significance of liquid phase extraction.
- (g) State and derive an equation for Bragg's law.

SECTION-B

2. Explain the principle and working of DSC (Differential Scanning Calorimetry).
3. Discuss background and principles of analytical method validation as per ICH guidelines.
4. Explain the fundamental principles and instrumental arrangements of Mass spectrometry.

SECTION-C

5. Explain the fragmentation pattern rules used in Mass spectroscopy.
6. Write a note on single crystal diffraction and powder diffraction.
7. Discuss the instrumentation and application of DTA.
8. Enlist the different X-ray diffraction techniques and explain any one in detail.
9. Write a comparative account on H-NMR and C-NMR.
10. Explain validation parameter for electronic balance.
11. Explain Spin-Spin coupling and coupling constant.
12. Explain the principle and procedure involved in the solid phase extraction.
13. How are X-ray produced? What are the modifications of X-ray tube?

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.