

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2016

B.Pharm VIII Semester

COURSE CODE: 12B1WPY835

MAX. MARKS: 25

COURSE NAME: Analytical Techniques

COURSE CREDITS: 3

MAX. TIME: 1Hr 30 Min

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

- Q.1 What role does vapor pressure play in a GC separation? 2
- Q.2 Explain the principles by which qualitative analysis can be performed in GC with the use of retention times. 3
- Q.3 Why is HPLC an improvement over the open-column technique? 2
- Q.4 How does a double-beam atomic instrument differ from a double-beam molecular instrument? 2
- Q.5 What is the difference between analytical GC and preparative GC? 2
- Q.6 Distinguish normal phase HPLC from reverse phase HPLC. List some typical mobile and stationary phases for: (a) reverse phase HPLC, and (b) normal phase HPLC. 2
- Q.7 What type of HPLC should be chosen for each of the following separation applications? 3
- (a) All mixture components have formula weights less than 2000, are molecular and polar, and are soluble in nonpolar organic solvents.
- (b) Mixture components have formula weights varying from very large to rather small and are nonionic.
- (c) Mixture components have formula weights less than 2000, are molecular and polar, and are water soluble.
- Q.8 What is an atomizer? Identify at least four atomizers used in atomic spectroscopy. 2
- Q.9 What is ChromosorbTM? What is its use in GC? 2
- Q.10 Why are sampling and sample preparation procedures as crucial to the success of an analysis as the analytical method chosen? 2
- Q.11 What is an absorption spectrum? What is the difference between a molecular absorption spectrum and an atomic absorption spectrum and why does this difference exist? 3