Weekly Assignment of Pharmaceutical Analysis-II (Prepared by Dr. Supriyo Saha)

- 1. When stationary phase in polar and mobile phase is non-polar: that chromatography known as
- a. Normal Phase Chromatography
- b. Reverse Phase Chromatography
- 2. Active components of column used in HPLC:
- a. Salt
- b. Silica
- c. Alumina
- d. Both b and c
- 3. Full name of HPLC
- Ans: High Performance Liquid Chromatography.
- 4. Mention the main components of HPLC system?
- Ans: Solvent Reservoir, Pump, An injection valve, A column, A detector unit, A data processing unit.
- 5. The main principle behind HPLC:
- a. Partition coefficient
- b. Adsorption
- c. Both a and B.
- 6. When the composition of the mobile phase is changed during separation that HPLC system is known as:
- a. Isocratic system
- b. Gradient system
- 7. Mention the process for outgassing or degassing?
- Ans: Helium purging, Sonication and vacuum purging
- 8. When stationary phase composed of acidic or basic molecules with +ve or -ve charge:
- a. Ion exchange HPLC
- b. Size exclusion HPLC
- c. Reverse Phase HPLC
- 9. Solenoid valve is present in:
- a. High pressure gradient HPLC
- b. Low pressure gradient HPLC
- 10. Most effective degassing system is:
- a. Sonication
- b. Helium purging

c. vaccum degassing

- 11. When only the main peak of the sample is consider for calculation:
- a. Chromatographic purity
- b. Chromatographic assay

12. If two peaks such as A and B observed with 1.5 cm and 3.0 cm of peak width, respectively and obtained in 12.5 min and 20.6 min, respectively with mobile phase composition (methanol: water :: 60:40) static during the analysis with 1.2 ml/min of flow rate. Calculate

- a. Resolution
- b. Relative retention time
- c. Retention volume
- d. Mention is it an isocratic or gradient system
- e. Column efficiency
- 13. Name the detectors used in HPLC system?
- 14. Enlist the parts of FTIR.
- 15. Differentiate between dispersive IR and FTIR.