

Hemchandracharya North Gujarat University, Patan  
Bachelor of Vocation

Pharmaceutical Chemistry Semester-IV  
Mid SEM Examination, March 2017  
Advanced Analytical Chemistry-II (PC-413)

Time: 2 Hrs 15 Min.

/03/2017

Marks: 60

Q-1 Answer any 12 Questions.

[1 mark each]

(12)

1. What is chromatography?
2. Give 2 names of NP mobile phase solvents and 2 names of RP mobile phase solvents.
3. Methanol is non-polar when compare to water. (True/False).
4. State the difference between classical & instrumental chromatographic techniques.
5. In a Normal phase HPLC there is a ...
  - (a) Polar solvent/Non polar column
  - (b) Non polar solvent/Non polar column
  - (c) Non polar solvent/polar column
  - (d) All of the above
6. PDA means \_\_\_\_\_.
7. Give the definition of resolution.
8. What is accuracy?
9. \_\_\_\_\_ is a universal detector for HPLC.
  - (a) UV
  - (b) PDA
  - (c) RID
  - (d) all of the above
10. In normal phase chromatography system mobile phase should be more polar than stationary phase (True/False).
11. An isocratic system in HPLC one in which the temperature of the column
  - (a) remains constant
  - (b) changes continuously
  - (c) changes in a series of step
  - (d) none of these

12. Write down the full name of HPLC.

13. C-8 is a type of non-polar solvent (True/False).

Q-2 Answer any 5 Questions.

[4 mark each] (20)

1. Describe manual injection system for HPLC.
2. Discuss detectors of HPLC. (Minimum 3).
3. Give the classification based on principle of chromatography.
4. Which precaution should be taken for preparing mobile phase for HPLC?
5. Applications of HPLC.
6. Explain chromatogram with retention time, peak height, tailing and fronting.

Q-3 Answer any 4 Questions.

[7 mark each] (28)

1. Instrumentation and working methodology of HPLC with Detectors.
2. Types of columns in HPLC.
3. Discuss gradient instrumentation of HPLC.
4. Discuss difference between HPLC and Paper Chromatography.
5. Compare C-8, C-18 and C-4 columns in terms of advantages and disadvantages.

-----BEST OF LUCK-----