



M 8785

Reg. No. :

Name :

II Semester B.Sc. Degree (CCSS – 2014 Admn. – Regular)
Examination, May 2015
CORE COURSE IN POLYMER CHEMISTRY
2B02 PCH : Analytical Chemistry

Time : 3 Hours

Max. Marks : 40

SECTION – A

Answer **all** questions. **Each** question carries **1** mark.

1. Differentiate between molarity and molality.
2. Give the Bronsted concept of acids and bases.
3. What is meant by adsorption chromatography ?
4. What is measured in DTA ? (4x1=4)

SECTION – B

Answer **any seven** questions. **Each** question carries **2** marks.

5. What are primary standards ? What are the qualities which a primary standard must have ?
6. Dilute solutions of alkali metal in liquid ammonia are blue in colour and are paramagnetic. Why ?
7. Explain levelling effect of a solvent.
8. Sketch the titration curve for titration of a strong acid against a strong base.
9. What is meant by HSAB principle ?

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10. Explain R_f value in chromatography.
11. What is meant by elution in chromatography ?
12. Briefly explain solvent extraction.
13. Briefly state the principle of FES ?
14. What is thermometric titration ?

(7×2=14)

SECTION – C

Answer **any 4** questions. **Each** question carries **3** marks.

15. Explain the theory of TLC.
16. Explain the theory of complexometric titrations.
17. How are solvent classified ?
18. Explain ion exchange chromatography ?
19. Explain the thermogram of calcium oxalate in an inert atmosphere.
20. What is meant by neutron diffraction method of chemical analysis ?

(4×3=12)

SECTION – D

Answer **any 2** questions. **Each** question carries **5** marks.

21. Discuss briefly the theory of acid-base titrations.
22. Explain the special properties of liquid ammonia as a non-aqueous solvent.
23. Explain the principle, application and advantages of Size Exclusion chromatography.
24. Explain any four applications of TGA.

(2×5=10)