M 8863

Reg. No. : .....

Name : .....

II Semester B.Sc. Degree (CCSS – 2014 Admn. – Regular) Examination, May 2015
CORE COURSE IN CHEMISTRY
2B03 CHE : Analytical Chemistry

Time : 3 Hours Max. Marks : 40

SECTION – A

Answer **all** questions. **Each** question carries **one** mark. **(1×4=4)**

1. Define R_f value.
2. What are metallochromic indicators ?
3. What is meant by thermogravimetry ?
4. Give the autoionisation of HF.

SECTION – B

Answer **any seven** questions. **Each** question carries **2** marks. **(2×7=14)**

5. Write any two applications of DTA.
6. What are thermometric titrations ?
7. What is meant by levelling effect ?
8. What is partition chromatography ? Give one application.
9. What are the requisites of a good extractant ?
10. How does polarity affect the strength of acids and bases ?
11. What are the desirable properties of a precipitant in gravimetry ?
12. What are hard and soft acids and bases ?
13. Explain Lux Flood concept of acids and bases with examples.
14. Draw the titration curve for sodium carbonate versus hydrochloric acid titration.

P.T.O.

SECTION – C

Answer **any 4** questions. **Each** question carries **3** marks. **(3×4=12)**

15. Discuss the principles of iodometric and iodimetric titration.
16. What are the factors on which the selectivity of an extraction process depends ?
17. What are the factors affecting TGA ?
18. Explain the utility of solubility product in group analysis.
19. What are the merits of using liquid ammonia as a solvent ?
20. Explain the analytical applications of solvent extraction.

SECTION – D

Answer **any 2** questions. **Each** question carries **5** marks. **(5×2=10)**

21. Explain HSAB principle. What are its applications ?
22. a) What is neutron diffraction ? How does it differ from X-ray diffraction ? **3**
    b) What are the uses of neutron diffraction ? **2**
23. a) What is the principle of ion exchange chromatography ? **2**
    b) What are its advantages and applications ? **3**
24. a) Explain the theory of complexometric titration. **3**
    b) What are the different types of EDTA titration ? **2**

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