

Reg. No. : .....

Name : .....

II Semester B.Sc. Degree (C.B.C.S.S. – Reg./Supple./Imp.)

Examination, May 2017

CORE COURSE IN CHEMISTRY

2B03 CHE : Analytical Chemistry

(2014 Admn. Onwards)

Time : 3 Hours

Max. Marks : 40

## SECTION – A

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

1. What is meant by leveling effect ?
2. What are secondary standards ? Give examples.
3. What is the principle of adsorption chromatography ?
4. What is meant by DTA ?

(4×1=4)

## SECTION – B

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

5. Explain the function of complexometric indicator.
6. What are the limitations of Lewis concept ?
7. Explain the factors favouring solvent extraction.
8. What are the applications of ion exchange chromatography ?
9. Explain the use of diphenylamine as redox indicator.
10. Mention the factors which affect the strength of acids and bases.
11. What are the uses of thermometric titration ?
12. What are the informations obtained from a thermogram ?



13. HCl is not used in permanganometric titrations. Why ?

14. Explain Batch and Continuous extraction.

(7×2=14)

### SECTION – C

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

15. What are the limitations of activation analysis ?

16. Discuss the analytical applications of solvent extraction.

17. Explain the terms :

a) Retardation factor

b) Elution

c) Relative retention.

18. Explain theory of acid base titration.

19. What are the two principles involved in cation analysis ?

20. Discuss the nature of bonding and stability of hard and soft acid base combinations.

(4×3=12)

### SECTION – D

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

21. a) Explain the various operations involved in gravimetric analysis.

3

b) How is iron estimated gravimetrically ?

2

22. a) Describe the principle of TLC. What are its advantages ?

3

b) Explain its applications.

2

23. a) Discuss the various reactions carried out in liquid ammonia.

4

b) What are its limitations ?

1

24. Write notes on :

a) Neutron diffraction

b) Gas chromatography.

(2×5=10)