



K20U 0297

Reg. No. : .....

Name : .....

II Semester B.Sc. Degree (CBCSS – Supplementary/Improvement)  
Examination, April 2020  
(2014-2018 Admissions)  
**CORE COURSE IN CHEMISTRY**  
**2B 03 CHE : Analytical Chemistry**

Time : 3 Hours

Max. Marks : 40

SECTION – A

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

1. Name a redox indicator.
2. Give the auto ionization of  $\text{NH}_3$ .
3. What is meant by titration curve ?
4. Expand TGA.

(4×1=4)

SECTION – B

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

5. What is meant by pH indicators ? Give two examples.
6. Explain the requirement of a gravimetric precipitate.
7. What is the principle of activation analysis ?
8. Explain the disadvantages of  $\text{liq.NH}_3$  as a solvent.
9. What is meant by synergistic extraction ?
10. What is the advantage of using masking agents in solvent extraction ?
11. Explain levelling effect.
12. Sketch the titration curve for NaOH versus HCl titration.
13. Give any two applications of ion exchange chromatography.
14. What is meant by thermometric titration ?

(7×2=14)

P.T.O.



## SECTION - C

Answer any 4 questions. Each question carries 3 marks.

15. Discuss the applications of HSAB concept.
16. Write a note on thin layer chromatography.
17. Explain the methods for expressing concentration of a solution.
18. Explain the principles involved in cation analysis.
19. What are the factors affecting solvent extraction ?
20. Describe the thermogram of  $\text{CaC}_2\text{O}_4$ .

(4×3=12)

## SECTION - D

Answer any 2 questions. Each question carries 5 marks.

21. Give any three reactions that can be carried out in liquid HF. What are the characters of a solvent ?
22. Explain gel permeation chromatography. What are the applications ?
23. Give an account of the working principle, instrumentation and application of DTA.
24. Discuss the principle involved in complexometric titration. Write a note on metal ion indicators.

(2×5=10)

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