

Enrollment No: _____

Exam Seat No: _____

C. U. SHAH UNIVERSITY
Summer Examination-2022

Subject Name : Analytical Chemistry-II

Subject Code : 4SC05ACH1

Branch : B.Sc. (Chemistry)

Semester: 5

Date: 27/04/2022

Time: 11:00 To 02:00

Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

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|------------|--|-------------|
| Q-1 | Attempt the following questions: | (14) |
| | a) Define qualitative analysis. | 01 |
| | b) What is molarity? | 01 |
| | c) Define conductance. | 01 |
| | d) What do you mean by standard deviation? | 01 |
| | e) Give the example of standard deviation. | 01 |
| | f) Define quantitative analysis. | 01 |
| | g) Write the unit of conductance. | 01 |
| | h) What do you mean by solubility? | 01 |
| | i) Define pH. | 01 |
| | j) Define normality. | 01 |
| | k) Define acid base titration. | 01 |
| | l) What are significant figures? | 01 |
| | m) Write the examples of weak acids. | 01 |
| | n) Write the test for Cl ⁻ ion detection. | 01 |

Attempt any four questions from Q-2 to Q-8

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| Q-2 | Attempt all questions | (14) |
| A | Discuss operational and personal errors. | 07 |
| B | Discuss the steps involving in minimization of errors. | 07 |
| Q-3 | Attempt all questions | (14) |
| A | Discuss absolute error and relative error. | 05 |
| B | Write a note on | 05 |
| | 1. Titrant | |
| | 2. Reagent | |
| C | Write a note on Argentometric titration. | 04 |
| Q-4 | Attempt all questions | (14) |
| A | Discuss Importance of Q-test and T-test. | 05 |
| B | Explain Ostwald's law. | 05 |



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|------------|--|-------------|
| C | Write a note on electric transport, conductance in metals | 04 |
| Q-5 | Attempt all questions | (14) |
| A | Discuss Separations of following species in presence of each other 1. Cl^- , Br^- , I^- 2. PO_4^{3-} , AsO_3^{3-} , AsO_4^{3-} | 07 |
| B | Discuss the neutralization, redox, precipitation titrations. | 07 |
| Q-6 | Attempt all questions | (14) |
| A | Discuss the cell constant and its importance. | 07 |
| B | Discuss Volhard's method. | 07 |
| Q-7 | Attempt all questions | (14) |
| A | Discuss applications of Redox Titration. | 07 |
| B | Write a note on Fajan's method and Mohr's method | 07 |
| Q-8 | Attempt all questions | (14) |
| A | Lambert-Beer's Law Derivation and applications. | 07 |
| B | Discuss Kohlrausch law and its importance. | 07 |

