

Enrollment No: _____

Exam Seat No: _____

C.U.SHAH UNIVERSITY

Summer Examination-2017

Subject Name: Analytical Chemistry-I

Subject Code: 5SC01ACH1

Branch: M.Sc.(Chemistry)

Semester: 1

Date: 28/03/2017

Time: 10:30 To 01:30

Marks: 70

Instructions:

- (1) Use of Programmable calculator and 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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SECTION – I

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|------------|---|-------------|
| Q-1 | Define the Following terms: | (07) |
| | A Adsorption and absorption | 02 |
| | B Standardization | 02 |
| | C Calibration | 01 |
| | D Hydration | 01 |
| | E Analytical techniques | 01 |
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| Q-2 | Attempt all questions | (14) |
| | A Write a note on interaction of light | 05 |
| | B Discuss the applications of analytical techniques | 05 |
| | C Write a note on Adulteration of oils | 04 |
| | OR | |
| Q-2 | Attempt all questions | (14) |
| | A Discuss “food preservatives” | 05 |
| | B Write a note on Adulteration of fats | 05 |
| | C Explain nutritional labeling | 04 |
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| Q-3 | Attempt all questions | (14) |
| | A Discuss the monochromators and detectors of spectrophotometer | 08 |
| | B Write a note on sample preparation for food analysis | 06 |
| | OR | |
| Q-3 | Attempt all questions | (14) |
| | A Discuss the classical and instrumental methods for analytical techniques | 08 |
| | B Write a note on compositional analysis of foods | 06 |



SECTION – II

- Q-4** Define the Following terms: (07)
- A** Excitation 02
 - B** Dissociation 02
 - C** Errors 01
 - D** Precision 01
 - E** Emission 01
- Q-5** Attempt all questions (14)
- A** Write a note on sampling of solid and liquid. 05
 - B** Discuss the advantages and disadvantages of instrumental techniques 05
 - C** Explain the Common ion effect 04
- OR**
- Q-5** Attempt all questions (14)
- A** Write a note on analytical method 05
 - B** What is accuracy? Discuss neutralization techniques 05
 - C** Write a note on Electrolytic dissociation 04
- Q-6** Attempt all questions (14)
- A** What is solubility product? Discuss the theory of AAS 08
 - B** Discuss the sample handling and applications of Fluorimetry 06
- OR**
- Q-6** Attempt all Questions (14)
- A** What is Phosphorimetry? Discuss the Jalonski diagram for excited state molecule 08
 - B** Discuss the theory and instrumentation of Flame photometry 06

