# C.U.SHAH UNIVERSITY Summer Examination-2018

## Subject Name: Analytical Chemistry-I

Subject Code: 5SC01	ACH1	Branch: M.Sc. (Chemistry)	
Semester: 1	Date: 27/03/2018	Time: 02:30 To 05:30	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.

### SECTION – I

Q-1		Attempt the Following questions	(07)
a		Define: Spectroscopy	
	b.	Define the term Monochromator.	(1)
	c.	What do you meant by Compositional analysis of food?	(1)
	d.	Define the light source. What do you meant by wavelength and Frequency?	
	e.		
	f.	Define: Calibration.	(1) (1)
	g.	Define the term analytical chemistry.	(1)
Q-2		Answer the following questions	
	a.	Explain the classification of analytical techniques.	(7)
	b.	Explain the Karl-Fischer method for analysis of moisture from food.	(7)
		OR	
Q-2		Answer the following questions	(14)
	a.	Explain the dry ashing method for food analysis.	(7)
	b.	Define and explain the given terms: Food Analysis, Spectrophotometer,	(7)
		absorption of light and detector.	
Q-3		Answer the following questions	(14)
	a.	Explain the role of analytical chemistry.	(7)
	b.	Explain the chemical method for analysis of fiber from food sample.	(7)

#### OR

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Q-3	Answer the following questions	
a.	Explain the Ultraviolet absorption method for analysis of protein.	(5)
b.	Explain the analysis of phosphorus from food sample.	(5)
c.	Explain the sample preparation for food, regulations and international standards related to food analysis and nutritional labeling.	(4)

# **SECTION – II**

Q-4		Attempt the Following questions	(07)
	a.	What do you mean by quantitative analysis?	(1)
	b.	What do you meant by selection of analytical method?	(1)
	c.	Define solubility product.	(1)
	d.	Define the standardization of solution.	(1)
	e.	Define the sampling.	(1)
	f.	Define the term: Common ion effect.	(1)
	g.	Define secondary standard.	(1)
Q-5		Answer the following questions	(14)
	a.	Explain the Jablonski diagram.	(7)
	b.	Explain the Law of mass action and ionization product of water.	(7)
		OR	
Q-5		Answer the following questions	
	a.	Explain the instrumentation of phosphorimetry.	(7)
	b.	Explain the principle and applications of flamephotometry.	(7)
Q-6		Answer the following questions	(14)
	a.	Explain the instrumentation of atomic absorption spectroscopy.	(7)
	b.	Explain the errors and minimization of error.	(7)
		OR	
Q-6		Answer the following questions	
	a.	Explain the principles and applications of turbidimetry.	(7)
	b.	Explain the precipitation, redox and complexometric technique.	(7)

