

C.U.SHAH UNIVERSITY

Summer Examination-2018

Subject Name: Physical Chemistry-II

Subject Code: 4SC06CHC3

Branch: B.Sc. (Chemistry)

Semester: 6

Date: 02/05/2018

Time: 02:30 To 05:30

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.

Q-1	Attempt the following questions:	(14)
	a Give the statement of third law of thermodynamics.	01
	b What do you mean by residual entropy?	01
	c Define the reversible reaction	01
	d Define chemical kinetics	01
	e What do you mean by radioactivity?	01
	f Define isobars	01
	g Define half-life period	01
	h Define mass defect	01
	i Define zero order reaction.	01
	j Define reverse osmosis	01
	k Define boiling point elevation.	01
	l What is SI unit of radioactivity?	01
	m ${}_{88}\text{Ra}^{236} \longrightarrow {}_{86}\text{Rn}^{232} + ?$. Complete the given nuclear reaction	01
	n Define nuclear chain reaction.	01

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

Q-2	Attempt all questions	(14)
	a) Explain the determination of absolute entropies of solid, liquid and gasses.	07
	b) Explain the Le'Chateliers Principle	07
Q-3	Attempt all questions	(14)
	a) Explain methods to determine the order of reaction	07
	b) Calculate half-life for first, second and third order reactions	07
Q-4	Attempt all questions	(14)
	a) Explain the first order reaction.	05
	b) Derive the equation: $S=k\ln W$	05



