

Enrollment No: _____

Exam Seat No: _____

C.U.SHAH UNIVERSITY

Summer Examination-2018

Subject Name : Industrial Chemistry-I**Subject Code : 4SC04IDC1****Branch: B.Sc. (Chemistry, Physics)****Semester : 4****Date : 03/05/2018****Time : 10:30 To 01:30****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) | Define: Fertilizers | 01 |
| b) | Define: Ceramics | 01 |
| c) | Define: Glass | 01 |
| d) | Define: Insecticides | 01 |
| e) | Complete the following reaction
$\text{HNO}_3 + \text{_____} \rightarrow \text{NH}_4\text{NO}_3 ; \Delta\text{H} = -20.6 \text{ kcal}$ | 01 |
| f) | Complete the following reaction
$\text{CaCO}_3 + \text{Na}_2\text{CO}_3 + 6\text{SiO}_2 \longrightarrow \text{_____} + 2\text{CO}_2 \uparrow (900\text{-}1000\text{ }^\circ\text{C temperature}).$ | 01 |
| g) | What are the three elements of natural nutrients? | 01 |
| h) | Draw the chemical structure of Potassium chloride. | 01 |
| i) | Draw the chemical structure of Aldrin. | 01 |
| j) | Write the uses of Dinitrophenols. | 01 |
| k) | What is Jollying? | 01 |
| l) | Which coloring oxide is used for white colored glaze on ceramic product? | 01 |
| m) | Write the general formula of Feldspars. | 01 |
| n) | Which method is used to manufacture ammonium nitrate fertilizer? | 01 |
- Attempt any four questions from Q-2 to Q-8**
- Q-2 Attempt all questions (14)**
- | | | |
|----|--|----|
| a. | Describe the production of Urea with process flow diagram. | 07 |
| b. | Give the process flow diagram of Ammonium Sulphate fertilizer. | 07 |
- Q-3 Attempt all questions (14)**
- | | | |
|----|--|----|
| a. | Write the manufacturing process of ceramic. | 07 |
| b. | Describe the manufacture of normal super phosphate with labeled diagram. | 07 |
- Q-4 Attempt all questions (14)**
- | | | |
|----|--|----|
| a. | Write the uses of Glass. | 05 |
| b. | Discuss the classification of ceramics based on reduction in porosity. | 05 |



	c.	Discuss the applications of ceramics.	04
Q-5		Attempt all questions	(14)
	a.	Discuss the classification of insecticides with examples.	07
	b.	Write the synthesis of Malathion.	07
Q-6		Attempt all questions	(14)
	a.	Write a short note on role of primary and secondary nutrients.	05
	b.	Explain chemical properties of Glass.	05
	c.	Explain Regenerative Tank furnace.	04
Q-7		Attempt all questions	(14)
	a.	Write the synthesis and uses of parathion .	07
	b.	Write the manufacturing process and uses of DDT.	07
Q-8		Attempt all questions	(14)
	a.	Discuss production of NPK fertilizer with flow diagram.	05
	b.	Explain various raw materials used in Glass.	05
	c.	Write the physical properties of glass and ceramics.	04

