

C.U.SHAH UNIVERSITY

Winter Examination-2015

Subject Name: Industrial Chemistry-I**Subject Code: 4SC05CHE1****Branch: B.Sc.(Chemistry)****Semester: 5 Date:11/12/2015 Time: 02.30 To 5.30 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.
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Q-1 Define following terms: (14)

- a) Nitration
- b) Sulphonation
- c) Oxidation
- d) Chlorination
- e) Bromination
- f) Oil
- g) Hydrogenation
- h) Condensation
- i) Alkylation
- j) Hydrolysis
- k) Monomer
- l) Polymerization
- m) Unit operation
- n) Perfumes

Attempt any four questions from Q-2 to Q-8**Q-2 Attempt all questions (14)**

- a Define Crystallization. Discuss the types of crystallization. 5
- b Discuss the different techniques for extraction. 5
- c Discuss the filtration with appropriate diagram. 4

Q-3 Attempt all questions (14)

- a Define distillation. Discuss different types of distillation assemblies. 5
- b Write short note on Synthesis of picric acid and p-nitro aniline from benzene. 5
- c Write the synthesis of p-nitro aniline from benzene. 4



Q-4	Attempt all questions	(14)
a	Define petrochemicals. Discuss the manufacturing process of methanol.	5
b	Discuss the manufacturing process of ethanol and acetic acid.	5
c	Write a short note on Industrial organic synthesis of ethyl acetate and phenol.	4
Q-5	Attempt all questions	(14)
a	Write a note on manufacturing steps of organic compounds.	5
b	Write the manufacturing process and uses of ammonia gas.	5
c	Write the manufacturing process and uses of acetylene gas.	4
Q-6	Attempt all questions	(14)
a	Write a note on hydrogen cell.	5
b	Discuss the manufacturing process of carbon dioxide.	5
c	Write the differences between oil and fats.	4
Q-7	Attempt all questions	(14)
a	Write the chemical and physical properties of oil and fats.	5
b	Discuss different analysis techniques for oil and fats.	5
c	Define soyabean .Discuss the manufacturing process for soyabean.	4
Q-8	Attempt all questions	(14)
a	Write a note on terpenoids and nitro musks perfumes.	5
b	Discuss the synthesis of perfumes from ester and alcohol.	5
c	Mol wt. of oil is 5484.14 gm/moles and numbers of bases required is 5. Also find the saponification values for KOH and NaOH. Also calculate the saponification difference.	4

