]	Enrollm	ent No:				
		C.U.SI	HAH UNIVERSITY			
		Sumn	ner Examination-2022			
;	Subject 1	Name: Industrial Chemi	stry-II			
;	Subject	Code: 4SC05IDC1	Branch: B.Sc. (Chemist	Branch: B.Sc. (Chemistry)		
;	Semeste	r: 5 Date: 28/04/2	2022 Time: 11:00 To 02:00	Marks: 70		
	(2) I (3) I	Use of Programmable calc Instructions written on ma	culator & any other electronic instrument is in answer book are strictly to be obeyed. igures (if necessary) at right places. seded.	prohibited.		
Q-1		Attempt the following	questions:	(14)		
	a)	Define: Unit Process		01		
	<b>b</b> )	Define: Esterification		01		
	c)	Define: Fat		01		
	d)	d) Complete the following chemical reaction				
		$CH_2 = CH_2 + 1/2 O_2$ (air)	+ H2O	·		
	e)	Write any two nitrating	agents.	01		
	f)	Write the uses of solven	t extraction unit operation.	01		
	g)	What is the application of	of Coumarin?	01		
	h)	Which catalyst is used for	or the synthesis of methanol from synthesis	gas? 01		
	i)	What are the differences	between oil and fats?	02		

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

Write Industrial uses of hydrogen.

Write the physical properties of oil and fats.

j)

k)

Q-2	Attempt all questions	(14)
a.	What is Polymerization? Explain it with suitable examples.	07
b.	Discuss about the Industrial organic synthesis of Methanol.	07



02

02

Q-3		Attempt all questions	(14)
	a.	Write a note on (a) Saponification value (b) Acid value (c) Iodine value.	07
	b.	Write a short note on Industrial organic synthesis of Ethyl acetate and Phenol.	07
Q-4		Attempt all questions	(14)
-	a.	Write a note on Distillation unit operation.	07
	b.	What is Nitration unit process? Explain it with some examples.	07
Q-5		Attempt all questions	(14)
	a.	Write a note on sulphonation unit process.	08
	b.	Mol. Wt. of unsaturated fat is 956 gm/moles and required moles of iodine formation are 4. Calculate the iodine value for the same.	03
	c.	Mol wt. of Triglyceride derivative is 1451 gm/moles and 3 moles of base (KOH) required for saponification. Calculate the saponification value for the same.	03
Q-6		Attempt all questions	(14)
	a.	Discuss any two method for industrial production of hydrogen.	07
	b.	Discuss about commercial production of carbon dioxide and oxygen.	07
Q-7		Attempt all questions	(14)
	a.	Write a note on the manufacturing process of methyl anthranilate, methyl salicylate and ester of benzyl alcohol.	07
	b.	What are the uses of carbon dioxide, nitrogen and oxygen?	07
Q-8		Attempt all questions	(14)
	a.	Explain industrial manufacturing process of organic synthesis of acetic acid.	07
	b.	What is Petrochemical? Discuss the manufacturing process of Acetone and Propenone.	07

