

Enrollment No: _____ Exam Seat No.: _____

C.U.SHAH UNIVERSITY

Winter Examination-2022

Subject Name: Industrial Chemistry-II

Subject Code: 4SC05IDC1

Branch: B.Sc. (Chemistry)

Semester: 5

Date: 28/11/2022

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)	Define: Hydrolysis	01
b)	Define: Alkylation	01
c)	What is the chemical formula of Palmitic acid?	01
d)	Complete the following chemical reaction $C_6H_5Cl + H_2O \rightarrow \underline{\hspace{2cm}} + HCl$	01
e)	Write any two sulphonating agents.	01
f)	What is the use of ammonia?	01
g)	What is the principal sources for perfumes?	01
h)	Write the uses of solvent extraction unit operation.	01
i)	What is an acid value?	01
j)	Which catalyst is used for the synthesis of acetone from Isopropanol?	01
k)	What is the use of nitrogen gas?	01
l)	A polar substance is more soluble in _____ solvents and less soluble in _____ solvents.	01
m)	Complete the following chemical reaction $CH_3OH \rightarrow \underline{\hspace{2cm}} + H_2$	01
n)	What is the use of hydrogen cell?	01

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

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



Q-3	Attempt all questions	(14)
a.	Write a note on Nitro musks.	07
b.	Discuss about the Industrial organic synthesis of Ethylene glycol.	07
Q-4	Attempt all questions	(14)
a.	What is Distillation unit operation? Discuss about any three types of distillation with proper examples and labeled diagram.	07
b.	What is Nitration unit process? Explain it with some examples.	07
Q-5	Attempt all questions	(14)
a.	Write a note on Hydroxylation unit process.	07
b.	Discuss in detail about animal, mineral and essential oils.	07
Q-6	Attempt all questions	(14)
a.	Write in detail about the sources of hydrogen.	07
b.	Discuss in detail about uses and production of oxygen.	07
Q-7	Attempt all questions	(14)
a.	Write a note on (a) Saponification value (b) Ester value (c) Iodine value.	07
b.	Discuss about uses and production of CO ₂ .	07
Q-8	Attempt all questions	(14)
a.	Explain industrial manufacturing process of organic synthesis of Methyl alcohol.	07
b.	Explain the organic synthesis of phenol with labeled diagram.	07

