

Enrollment No: \_\_\_\_\_

Exam Seat No.: \_\_\_\_\_

# C.U.SHAH UNIVERSITY

## Summer Examination-2022

**Subject Name: Industrial Chemistry-III****Subject Code: 4SC06IDC1****Branch: B.Sc. (Chemistry)****Semester: 6****Date: 09/05/2022****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.
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<b>Q-1</b>	<b>Attempt the following questions:</b>	<b>(14)</b>
a)	Define lubricant	01
b)	What is the unit of viscosity?	01
c)	Write some anti-oxidants which are additives for lubricating oils.	01
d)	Give some emulsifying agent for lubrication.	01
e)	Write the composition for gun powder.	01
f)	What is torpex?	01
g)	What is gelatin dynamite?	01
h)	Write some examples of composite solid propellants.	01
i)	Which softeners are used in rubber?	01
j)	Which ingredients are used in marine paints?	01
k)	Write the physical properties of rubber.	02
l)	Write some uses of white lead pigments.	02

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

<b>Q-2</b>	<b>Attempt all questions</b>	<b>(14)</b>
a.	Write a note on substances used as lubricants.	07
b.	Discuss about the properties of lubricants.	07
<b>Q-3</b>	<b>Attempt all questions</b>	<b>(14)</b>
a.	Explain in detail any two tests carried out on lubricants.	07
b.	Explain: How to prepare TNT, AN, PETN and Cyclonite?	07



<b>Q-4</b>	<b>Attempt all questions</b>	<b>(14)</b>
a.	Write some constructive and destructive uses of explosives.	05
b.	Give some characteristics of explosives.	05
c.	Discuss about the liquid propellants.	04
<b>Q-5</b>	<b>Attempt all questions</b>	<b>(14)</b>
a.	Write a note on Thiokol and Silicon rubber.	07
b.	Write in detail about vulcanization.	07
<b>Q-6</b>	<b>Attempt all questions</b>	<b>(14)</b>
a.	Discuss about the refining of crude rubber.	07
b.	Explain how to manufacture the paint with labeled diagram.	07
<b>Q-7</b>	<b>Attempt all questions</b>	<b>(14)</b>
a.	Explain the manufacturing process of white lead pigment with chemical reactions.	07
b.	Write in detail about the classification of paints.	07
<b>Q-8</b>	<b>Attempt all questions</b>	<b>(14)</b>
a.	Give some requirements for a good paint.	05
b.	How many types of lubricant? Write briefly about any one.	05
c.	What is an oxygen balance? Explain it with suitable examples.	04

