



Roll No:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

BTECH
(SEM I) THEORY EXAMINATION 2023-24
CHEMISTRY

TIME: 3HRS**M.MARKS: 100**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A**1. Attempt all questions in brief.****2 x 10 = 20**

Q no.	Question	Marks	CO
a.	Define solvent effect.	2	1
b.	Write a short note on graphite.	2	1
c.	Define heterogeneous system.	2	2
d.	Define reverse osmosis.	2	2
e.	Define fuels.	2	1
f.	Write the principle of bomb calorimeter.	2	2
g.	Define polymer composites.	2	3
h.	Define degree of freedom.	2	2
i.	Define calorific value.	2	1
j.	Write advantage of nanomaterials.	2	2

SECTION B**2. Attempt any three of the following:****3 x 10 = 30**

a.	Draw and explain Molecular orbital diagrams of diatomic molecules.	10	2
b.	Describe various types of electronic transitions.	10	2
c.	Explain the lime soda process.	10	2
d.	Describe the Zeolite method for the treatment of hard water.	10	3
e.	Enlist various parameters for the analysis of coal.	10	3

SECTION C**3. Attempt any one part of the following:****1 x 10 = 10**

a.	Describe metallic bonding.	10	1
b.	Enlist the defects in solids.	10	2

4. Attempt any one part of the following:**1 x 10 = 10**

a.	Describe liquid crystals.	10	1
b.	Write the applications of UV spectrophotometry.	10	2

5. Attempt any one part of the following:**1 x 10 = 10**

a.	Write the applications of Raman spectroscopy.	10	2
b.	Describe the components of battery.	10	1

6. Attempt any one part of the following:**1 x 10 = 10**

a.	Write the mechanism of rusting of iron.	10	3
b.	Enlist various methods for corrosion control.	10	3

7. Attempt any one part of the following:**1 x 10 = 10**

a.	Write the disadvantages of hard water.	10	2
b.	Describe condensation polymerization.	10	3