

Course Code: 23BS2T05
BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY &
SCIENCE
(AUTONOMOUS)

I - B. Tech II-Semester Supplementary Examinations (BR23), Sep/Oct - 2024
ENGINEERING CHEMISTRY (CE)

Time: 3 hours

Max. Marks: 70

Question Paper consists of Part-A and Part-B
Answer ALL the question in Part-A and Part-B

PART-A (10X2 = 20M)

	Marks	CO	BL
1. a) Define soft water?	(2M)	CO1	L1
b) What is a scale?	(2M)	CO1	L2
c) What is a secondary cell?	(2M)	CO2	L2
d) Define electroplating	(2M)	CO2	L2
e) Define functionality	(2M)	CO3	L2
f) What is LCV?	(2M)	CO3	L1
g) Write the constituents of Portland cement?	(2M)	CO4	L2
h) Define lubricant.	(2M)	CO4	L1
i) What is a nanomaterial?	(2M)	CO5	L1
j) Define flash point?	(2M)	CO5	L1

PART-B (5X10 = 50M)

2.a) Describe caustic embrittlement with advantages.	(5M)	CO1	L2
b) Interpret estimation of hardness of water by EDTA method.	(5M)	CO1	L3
(OR)			
a) Describe electro dialysis of brakish water with neat diagram.	(5M)	CO1	L2
b) Discuss ion exchange process with a diagram.	(5M)	CO1	L2
3.a) What is a primary battery? Explain the working of Zinc-air cell.	(5M)	CO2	L2
b) Describe the working of Hydrogen-oxygen fuel cell.	(5M)	CO2	L2
(OR)			
a) Discuss the mechanism of electrochemical theory of corrosion.	(5M)	CO2	L2
b) Differentiate between cathodic and anodic protection of corrosion.	(5M)	CO2	L4
4.a) Distingiush between thermo plastics and thermo setting plastics.	(5M)	CO3	L4
b) Discuss on preparation, properties and applications of Bakelite.	(5M)		L2

			CO3	
	(OR)			
a)	Describe ultimate analysis of coal.	(5M)	CO3	L2
b)	Discuss about bio fuels?	(5M)		L2
			CO3	
5.a)	Explain any one mechanism of lubricants.	(5M)	CO4	L2
b)	Distinguish between setting and hardening of cement.	(5M)		L4
			CO4	
	(OR)			
a)	Classify Lubricants.	(5M)	CO4	L2
b)	Discuss any two properties of lubricating oils.	(5M)		L2
			CO4	
6a)	Write a note on preparation of nano metals.	(5M)	CO5	L2
b)	Interpret the applications of colloids.	(5M)	CO5	L3
	(OR)			
a)	Explain BET equation.	(5M)	CO5	L2
b)	Discuss on biological preparation of nanometals.	(5M)	CO5	L2
