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IIV B.Tech REGULAR DEGREE EXAMINATION

AUGUST, 2023

Second Semester

Time: Three Hours

Common to CE/AIIML/CB/DS/ME

Engineering Chemistry

Maximum: 70 Marks

Answer question 1 compulsory.

Answer one question from each unit.

(1X1 = 14Marks)

(4X14=56 Marks)

1	a) Define the hardness of water	CO1	BL	M
	b) Name the any four salts causing hardness	CO1	L1	1
	c) List out of two sources of water	CO1	L2	1
	d) Define foaming	CO1	L1	1
	e) Define corrosion	CO2	L1	1
	f) Explain EMF	CO2	L1	1
	g) Give names of material used as sacrificial anodes	CO2	L2	1
	h) Define fuel	CO3	L1	1
	i) Illustrate the examples of the anti-knocking agents	CO3	L1	1
	j) Define octane number	CO4	L2	1
	k) Name the highest ranked coal.	CO4	L3	1
	l) Mention the applications of Aspirin	CO1	L2	1
	m) Define Elimination reaction	CO1	L3	1
	n) Define thermosetting polymer with example?	CO1	L1	1
		CO2	L2	1
<u>Unit-I</u>				
2	a) Explain the method of determination of alkalinity of water	CO1	L3	7M
	b) Define sludges? Describe a note on formation, disadvantages, and removal methods.	CO1	L3	7M
<u>(OR)</u>				
3	a) Explain zeolite process of water with neat labelled diagram and equations	CO1	L4	7M
	b) Define desalination? Explain the process of desalination using electrodialysis method	CO1	L3	7M
<u>Unit-II</u>				
	a) Describe the mechanism of dry corrosion	CO2	L2	7M
	b) Analyse the factors influencing rate of corrosion.	CO2	L3	7M
<u>(OR)</u>				
3	a) Discuss the electro plating of Ni	CO2	L3	7M
	b) Summarize (i) Entropy (ii) Free energy	CO2	L1	7M
<u>Unit-III</u>				
6	a) Compare the construction and working of Bunsen calorimeter with neat label diagram	CO3	L3	7M
	b) Write a short note on LPG and CNG.	CO3	L2	7M
<u>(OR)</u>				
7	a) Describe the knocking agents and anti-knocking agents	CO3	L2	7M
	b) What is bio fuel? compare bio fuel with petrol	CO3	L2	7M
<u>Unit-IV</u>				
8	a) What is the role of SN1 mechanism in the chemical synthesis	CO4	L1	7M
	b) Generate the method of synthesis, properties and applications of "Paracetamol"	CO4	L3	7M
<u>(OR)</u>				
9	a) Differentiate the thermoplastics and thermosetting plastics.	CO4	L4	7M
	b) Define thermo plastic? Explain the preparation and applications of PVC	CO4	L3	7M