

Hall Ticket Number:

Y 1 9 A C S 4 2 9

December, 2019

I/IV B.Tech (Regular) DEGREE EXAMINATION

Second Semester

Time: Three Hours

Answer Question No.1 compulsorily.

Answer ONE question from each unit.

1. Answer all questions

CE/ME/EEE Branches
Engineering Chemistry

Maximum : 50 Marks

(1X10 = 10 Marks)

(4X10=40 Marks)

(1X10=10 Marks)

No.	Questions 1 (a to j)	Level	COs	
a	Define hardness of water?	Remember	CO 1	
b	Define priming.	Remember	CO 1	
c	What is meant by phosphate conditioning	Understand	CO 1	
d	What is galvanic corrosion?	Understand	CO 2	
e	State "Pilling-Bedworth rule"?	Remember	CO 2	
f	Define Octane number.	Remember	CO 3	
g	What is lower calorific value of fuel	Understand	CO 3	
h	Write the composition of Petrol	Remember	CO 3	
i	Define addition reactions?	Remember	CO 4	
j	Write any two applications of Poly Hydroxy Buterate (PHB).	Apply	CO 4	
UNIT - I				
No.	Questions (2 to 9)	Level	COs	Marks
2	(a) Define Alkalinity of water. Discuss the estimation of alkalinity of water.	Remember, Understand	CO 1	6M
	(b) 100 mL of water sample on titration with N/50 H ₂ SO ₄ required 8.0 mL of the acid to phenolphthalein end point and 9 mL of the same acid to methyl orange end point. Determine the type and amount of alkalinity present in water sample.	Understand, apply	CO 1	4M
OR				
3	(a) Explain the following i).Boiler corrosion ii). Caustic embrittlement	Understand	CO 1	6M
	(b) Discuss the method of treatment of brackish water by Electro dialysis	Understand, apply	CO 1	4M
UNIT - II				
4	(a) Deduce Nernst equation for single electrode potential. Write its applications (any two)	Analyze, Apply	CO 2	4M
	(b) What is electrochemical corrosion? Describe the mechanism of electrochemical corrosion by evolution of hydrogen type and absorption of oxygen type.	Remember, Understand	CO 2	6M
OR				
5	(a) Discuss various factors affecting corrosion rate of a metal.	Understand	CO 2	6M
	(b) Write short note on Electro plating of Gold.	Understand	CO 2	4M
UNIT - III				
6	(a) Define calorific value of a fuel. Discuss the construction and working of Bomb calorimeter to determine calorific value of solid fuel.	Remember, Create	CO 3	7M
	(b) Write short note on knocking and anti-knocking agents.	Understand	CO 3	3M
OR				
7	(a) What is meant by Flue gas? Explain the method of analysis of flue gas by Orsat apparatus	Remember, Understand	CO 3	7M
	(b) What is LPG? What are the advantages of LPG over other gaseous fuels	Remember	CO 3	3M
UNIT - IV				
8	(a) Explain briefly the various classes of conducting polymers.	Understand	CO 4	7M
	(b) Describe a method of synthesis of "Aspirin"	Understand	CO 4	3M
OR				
9	(a) Distinguish between Thermoplastic and Thermosetting polymers	Analyze	CO 4	6M
	(b) Explain the preparation and applications of Bakelite	Understand	CO 4	4M