

Hall Ticket Number:

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

I/IV B.Tech (Regular) DEGREE EXAMINATION

APRIL, 2019

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 coagulation?	Remember	CO 1
b	What is meant by Calgon conditioning	Understand	CO 1
c	Define foaming.	Remember	CO 1
d	What is Dry corrosion?	Understand	CO 2
e	State "Pilling-Bedworth rule"?	Remember	CO 2
f	What is meant by Knocking?	Understand	CO 3
g	State Cetane value of diesel fuel?	Remember	CO 3
h	Write the main constituents of LPG.	Remember	CO 3
i	What is Anti Markownikoff's rule?	Understand	CO 4
j	Write any two applications of Poly Vinyl Chloride (PVC)	Apply	CO 4

UNIT – I

No.	Questions (2 to 9)	Level	COs	Marks
2	(a) Define Hardness of water. Compare hard water and soft water	Remember, Evaluate	CO 1	5M
	(b) 100 mL of water sample required 4mL of N/50 H ₂ SO ₄ for neutralization to phenolphthalein end point. Another 16 mL of the same acid was needed for further titration to methyl orange end point. Evaluate the type and amount of alkalinity.	Understand, Evaluate	CO 1	5M

OR

3	(a) Explain the following i).Boiler Corrosion ii). Formation of Scales	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	5M
	(b) Explain i). Galvanic Corrosion ii). Pitting corrosion	Understand	CO 2	5M

OR

5	(a) Discuss various factors affecting corrosion rate of a metal.	Understand	CO 2	6M
	(b) Explain Electro less plating of Nickel.	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 ranking of coal	Understand	CO 3	3M

OR

7	(a) Define Flue gas? Discuss the construction and working of Orsat apparatus for analysis of flue gas.	Remember, Create	CO 3	7M
	(b) What are Bio Fuels? List any two advantages of Bio diesel.	Remember	CO 3	3M

UNIT – IV

8	(a) Explain with mechanism of SN ¹ and SN ² reactions	Understand	CO 4	6M
	(b) Deduce a method of synthesis of "Aspirin"	Analyze	CO 4	4M

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