

Hall Ticket Number:

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

I/IV B.Tech (Supply) DEGREE EXAMINATION

Nov, 2019

First Semester

Time: Three Hours

Answer Question No.1 compulsorily.

Answer ONE question from each unit.

1. Answer all questions

Common for all Branches

Engineering Chemistry-I

Maximum : 60 Marks

(1X12 = 12 Marks)

(4X12=48 Marks)

(1X10=10 Marks)

No.	Questions 1 (a to l)
a	Define alkalinity of water?
b	Write any two examples for coagulants
c	What is meant by colloidal conditioning?
d	What is ozonization of water
e	Define Phase rule.
f	Define Eutectic point.
g	Define calorific value of fuel.
h	Write the composition of LPG
i	Define carbonization of coal
j	Write any two applications of alumina.
k	Define composites.
l	Define flash and fire points.

UNIT – I

No.	Questions (2 to 9)	Marks
2	(a) Compare between hard water and soft water.	4M
	(b) Discuss the determination of alkalinity of water	8M

OR

3	(a) Explain the following i).Boiler corrosion ii). prevention methods of scale	6M
	(b) Explain Lime soda process for purification of water	6M

UNIT – II

4	(a) Explain sedimentation, coagulation and filtration method for purification of water	8M
	(b) Discuss the method of treatment of brackish water by Electro dialysis	4M

OR

5	(a) Define phase, component and degree of freedom	6M
	(b) Explain phase diagram of water system	6M

UNIT – III

6	(a) Define calorific value of a fuel. Explain the determination of calorific value of solid fuel by Bomb calorimeter with neat labeled diagram	8M
	(b) Explain proximate analysis of coal	4M

OR

7	(a) Explain Otto-Hoffman by product method for carbonization of coal	6M
	(b) Explain octane and cetane number	6M

UNIT – IV

8	(a) Explain briefly i) Refractoriness ii) Refractoriness	8M
	(b) Explain briefly about polymer matrix composites	4M

OR

9	(a) Write notes on i) Graphite ii) molybdenum sulphide	5M
	(b) Define lubricants. Explain the mechanism of lubrication	7M