

Reg. No:

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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech I Year II Semester Regular Examinations November-2021

ENGINEERING CHEMISTRY

(Common to CE & AGE)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

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|---|-----------------------------------------------------------------|----|----|
| 1 | a What is priming and foaming? | L1 | 6M |
| | b Explain the process of scale and sludge formation in boilers. | L2 | 6M |

OR

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|---|-------------------------------------------------------------------------------------------------------------------------------------|----|-----|
| 2 | Describe the Ion exchange process for demineralization of water? What are the advantages and disadvantages of ion exchange process? | L3 | 12M |
|---|-------------------------------------------------------------------------------------------------------------------------------------|----|-----|

UNIT-II

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|---|-------------------------------------------------------------------------|----|----|
| 3 | a What is primary Battery? Write a note on Zinc-air battery. | L1 | 6M |
| | b Describe the Construction and Working of Methanol – Oxygen Fuel cell. | L3 | 6M |

OR

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|---|------------------------------------------------------------------------|----|----|
| 4 | a Write a note on sacrificial anodic protection? | L1 | 4M |
| | b What is electroplating? Explain electroplating of Nickel and copper? | L2 | 8M |

UNIT-III

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|---|------------------------------------------------------------------------------|----|-----|
| 5 | Explain the analysis of Coal (Proximate and Ultimate) With its Significance. | L2 | 12M |
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OR

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|---|---------------------------------------------------------------------------------------------------------|----|----|
| 6 | a What is functionality of monomer? | L1 | 4M |
| | b Write the preparation, properties and application of Buna-S rubber, Buna-N rubber and Thiokol rubber. | L2 | 8M |

UNIT-IV

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|---|-------------------------------------------------------------------------------------|----|-----|
| 7 | Define Viscosity? Determine the viscosity of lubricating oil by Redwood Viscometer. | L2 | 12M |
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OR

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|---|---------------------------------------------------------------------|----|----|
| 8 | a What is cement? How do you classify the cement? | L1 | 6M |
| | b Explain in detail about setting and hardening of Portland cement? | L2 | 6M |

UNIT-V

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|---|---------------------------------------------------------------------------------------------|----|-----|
| 9 | Write a note on any one chemical and electrochemical methods of preparation of nano metals. | L1 | 12M |
|---|---------------------------------------------------------------------------------------------|----|-----|

OR

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|----|-------------------------------------------------------------------|----|----|
| 10 | a Explain the BET Equation. | L2 | 6M |
| | b What are the factors influencing Adsorption of gases on solids. | L1 | 6M |

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