**20EE203**

**Hall Ticket Number:**

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| **I/IV B.Tech (Regular) DEGREE EXAMINATION** | | | |
| **September,2022** | **Electrical & Electronics Engineering** | | |
| **Second Semester** | **Engineering Chemistry** | | |
| **Time:** Three Hours | | **Maximum:** 70 Marks | |
| ***Answer question 1 compulsory.*** | | | **(14X1 = 14Marks)** |
| ***Answer one question from each unit.*** | | | **(4X14=56 Marks)** |

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|  |  |  | CO | BL | M |
| 1 | a) | |  | | --- | | Define Hardness ? | | CO1 | L1 | 1M |
|  | b) | Write a brief note on Sludges ? Scales ? | CO1 | L1 | 1M |
|  | c) | List out WHO Guidelines? | CO1 | L1 | 1M |
|  | d) | What is meant by Brackish water ? | CO1 | L1 | 1M |
|  | e) | Write brief note on EMF? | CO2 | L3 | 1M |
|  | f) | Mention the types of Corrosion? | CO2 | L1 | 1M |
|  | g) | What is meant by electro plating? | CO2 | L3 | 1M |
|  | h) | Define Cetane number ? | CO3 | L1 | 1M |
|  | i) | Write brief note on Lower Calorific value of fuel? | CO3 | L1 | 1M |
|  | j) | Define CNG ? | CO3 | L1 | 1M |
|  | k) | Illustrate about Extrinsic conducting polymers ? | CO4 | L1 | 1M |
|  | l) | Write about Bio degradable polymers | CO4 | L1 | 1M |
|  | m) | Summarize about Markownikoff’s rule? | CO4 | L2 | 1M |
|  | n) | Write the applications of polymers? | CO4 | L1 | 1M |
| **Unit-I** | | | | | |
| 2 | a) | Discuss about the estimation of hardness of water sample by EDTA method. | CO1 | L3 | 7M |
|  | b) | List out any two Disinfection methods ? Explain about them. | CO1 | L2 | 7M |
|  |  | **(OR)** |  |  |  |
| 3 | a) | Make use of neat diagram to explain Ion exchange process ? | CO1 | L3 | 7M |
|  | b) | Explain about Brackish water treatment by Reverse Osmosis. | CO1 | L2 | 7M |
| **Unit-II** | | | | | |
| 4 | a) | Derive Nernst Equation and mention two applications of it. | CO2 | L3 | 7M |
|  | b) | List out the Factors which influencing the rate of corrosion? | CO2 | L2 | 7M |
| **(OR)** | | | | | |
| 5 | a) | Make use of a neat diagram to explain electro less plating of Ni . | CO2 | L2 | 7M |
|  | b) | Explain the reactions occur in the Wet Corrosion? | CO2 | L1 | 7M |
| **Unit-III** | | | | | |
| 6 | a) | Write the Determination of calorific value by Bomb Calorimeter? | CO3 | L2 | 7M |
|  | b) | Discuss about Flue gas analysis by Orsat apparatus. | CO3 | L3 | 7M |
| **(OR)** | | | | | |
| 7 | a) | Explain a method of preparation of Bio-fuel? Mention its advantages? | CO3 | L2 | 7M |
|  | b) | Discuss about composition and uses of Liqued fuels? | CO3 | L1 | 7M |
| **Unit-IV** | | | | | |
| 8 | a) | Differentiate Thermo plastics and thermosetting plastics. | CO4 | L1 | 7M |
|  | b) | Write the steps involved in the synthesis of Aspirin. | CO4 | L2 | 7M |
| **(OR)** | | | | | |
| 9 | a) | Discuss about Bio degradable polymers ? | CO4 | L1 | 7M |
|  | b) | Explain about Conducting polymers. | CO4 | L2 | 7M |

