**18EED13**

**Hall Ticket Number:**

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| **IV/IV B.Tech (Regular) DEGREE EXAMINATION** | | | |
| **June, 2022** | **Electrical & Electronics Engineering** | | |
| **Seventh Semester** | **Power Distribution Systems** | | |
| **Time:** Three Hours | | **Maximum:** 50 Marks | |
| ***Answer question 1 compulsory.*** | | | **(10X1 = 10Marks)** |
| ***Answer one question from each unit.*** | | | **(4X10=40Marks)** |

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|  |  |  | CO | BL | M |
| 1 | a) | Define load growth. | CO1 | L2 | 1M |
|  | b) | What is the objective of Distribution system planning? | CO1 | L1 | 1M |
|  | c) | Define efficiency of distribution transformer | CO1 | L2 | 1M |
|  | d) | List different types of distribution transformers | CO2 | L2 | 1M |
|  | e) | Write the difference between circuit reclosures and circuit breakers | CO2 | L3 | 1M |
|  | f) | Define coordination. | CO2 | L2 | 1M |
|  | g) | What is the significance of secondary networks? | CO3 | L3 | 1M |
|  | h) | List any two reasons for having low power factor | CO3 | L3 | 1M |
|  | i) | Summarize the economic benefits from the capacitor installations. | CO3 | L2 | 1M |
|  | j) | Write the expression for copper loss. | CO4 | L2 | 1M |
| **Unit-I** | | | | | |
| 2 | a) | Explain the role of the computer in distribution system planning with neat schematic. | CO1 | L2 | 5M |
|  | b) | Explain the Load characteristics in distribution system. | CO1 | L2 | 5M |
|  |  | **(OR)** |  |  |  |
| 3 | a) | What is meant by load forecasting? Explain various factors which may affect load forecasting. | CO1 | L2 | 5M |
|  | b) | Explain the Diversified demand method. | CO1 | L2 | 10M |
| **Unit-II** | | | | | |
| 4 | a) | Explain the procedure for optimal location of substations. | CO2 | L3 | 5M |
|  | b) | Explain different sub transmission systems with neat sketches. | CO2 | L2 | 5M |
| **(OR)** | | | | | |
| 5 |  | Explain different types of substation bus schemes in detail? | CO2 | L2 | 5M |
| **Unit-III** | | | | | |
| 6 | a) | Derive the expression for power loss of a radial feeder with non-uniformly distributed load | CO3 | L2 | 5M |
|  | b) | Discuss about secondary banking. | CO3 | L2 | 5M |
| **(OR)** | | | | | |
| 7 | a) | Write short note on Automatic circuit reclosures and Automatic line sectionalizers. | CO3 | L2 | 5M |
|  | b) | Explain in detail about fuse to fuse coordination. | CO3 | L2 | 5M |
| **Unit-IV** | | | | | |
| 8 | a) | Investigate the effects of series capacitors in distribution systems. | CO4 | L2 | 5M |
|  | b) | Explain the procedure to determine best capacitor location in Distribution systems. | CO4 | L3 | 5M |
| **(OR)** | | | | | |
| 9 | a) | Discuss the methods for voltage control. | CO4 | L2 | 5M |
|  | b) | Derive the expression for voltage drop and power loss of a single –phase two wire lateral with un grounded neutral systems. | CO4 | L3 | 5M |

