**18EED13**

**Hall Ticket Number:**

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| **III/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION** | | | |
| **June, 2022** | **Electrical and Electronics Engineering** | | |
| **Sixth Semester** | **Power Distribution Systems** | | |
| **Time:** Three Hours | | **Maximum: 5**0 Marks | |
| *Answer Question No. 1 Compulsorily.* | | | (10X1 = 10 Marks) |
| *Answer* ***ANY ONE*** *question from each Unit.* | | | (4X10=40 Marks) |

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

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