

Code: EE7T6A

**IV B.Tech - I Semester – Regular/Supplementary Examinations
March – 2021**

**ELECTRICAL DISTRIBUTION SYSTEMS
(ELECTRICAL & ELECTRONICS ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11 x 2 = 22 M

1.

- a) Cite the objectives of distribution system planning.
- b) What is demand?
- c) Write the equation for the regulation of distribution transformer.
- d) How the capacity of the system can be upgraded to meet the increase in load density?
- e) Discuss the concept of primary-feeder loading.
- f) What is secondary banking?
- g) What is the main idea of using capacitor bank?
- h) Summarize the economic benefits from the capacitor installations.
- i) Discuss the time-current characteristics of fuse.
- j) Identify the requirements of line sectionalizers.
- k) What is the purpose of circuit breaker?

PART – B

Answer any **THREE** questions. All questions carry equal marks.
3 x 16 = 48 M

2. a) Explain various factors affecting the distribution planning. 10 M

b) Explain about rate structure used by the utilities. 6 M

3. a) Examine the various distribution transformers used in distribution systems. 8 M

b) Analyze various sub-station bus schemes in the distribution substations. 8 M

4. a) Explain the Radial-type primary feeders. 8 M

b) Discuss different aspects that affect the primary-feeder voltage levels. 8 M

5. a) Investigate the effects of series capacitors in distribution systems. 8 M

b) Illustrate the different types of capacitor bank connections. 8 M

6. a) Discuss the advantages and disadvantages of Automatic Line Sectionalizers. 6 M

b) With neat diagram, explain about operation of automatic circuit reclosers. 10 M