

5E3128

Roll No. : _____

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B. Tech. (Sem. V) (Main/Back) Examination, December - 2013
Electrical Engg.
5EE6.1 Advanced Distribution Systems

Time : 3 Hours]

[Total Marks : 80

[Min. Passing Marks : 24

*Attempt any five questions, selecting one question from each unit.
All questions carry equal marks. Schematic diagrams must be
shown wherever necessary. Any data you feel missing suitably
be assumed and stated clearly. Units of quantities used /
calculated must be stated clearly.*

Use of following supporting material is permitted during examination.
(Mentioned in form No. 205)

1. _____ **NIL** _____ 2. _____ **NIL** _____

UNIT - I

1 Discuss the following :

- (a) Strategic Forecasting
- (b) Spatial Load Forecasting
- (c) Technological Forecasting
- (d) Sources of Error

4×4=16**OR**

1 (a) What do you understand by future distribution systems ?
Explain the need of future distribution systems.

8

(b) Discuss the regression analysis in detail with suitable example.

8**UNIT - II**

2 (a) What do you understand by operation criteria and standards ?
Discuss with respect to distribution system.

8

- (b) Explain following in brief :
(i) Voltage regulation
(ii) kVA-km conductor loading.

4×2=8

OR

- 2 (a) In detail describe the correction of system voltage problems. 8
(b) Describe the practical counter measures for flickering on the power supply side and load side. 8

UNIT - III

- 3 Write short notes on following :
(a) Monitoring and compensation in distribution system.
(b) Maintaining of system voltage. rtuonline.com

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OR

- 3 (a) In detail describe the objectives of series and shunt capacitor in distribution system. 8
(b) What are the causes of harmonics in the power systems ? Draw and explain the equivalent circuit for harmonics. 8

UNIT - IV

- 4 (a) Discuss earth fault protection of feeders under feeble fault current conditions. 8
(b) Explain the following :
(i) Electrode earth resistance.
(ii) Temporary Grounding.

4×2=8

OR

- 4 Write short notes on :
(a) System Neutral earthing
(b) Earth conductor sizes.

8×2=16



UNIT - V

5 (a) What is the need of SCADA system ? Draw and explain the block diagram of SCADA system.

8

(b) What is the use of satellite communication for power systems ? Draw the diagram of VSAT network.

8

OR

5 Write short notes on following :

(a) Distribution Automation

(b) Fibre Optics base distribution system.

8×2=16

