

**R09**

Code: 9A02807

B.Tech IV Year II Semester (R09) Advanced Supplementary Examinations, July 2013

**DESIGN OF ELECTRICAL SYSTEMS**

(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions

All questions carry equal marks

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- 1 Write short notes on design aspects of:
  - (a) Climate control.
  - (b) Vertical transportation.
- 2 (a) Write short notes on special features applicable for high-rise apartment buildings.  
(b) Give brief classification of electrical installation in domestic buildings.
- 3 (a) Write short notes on selection of distribution architecture in industrial installations.  
(b) Write short notes on general characteristics of industrial installations.
- 4 (a) Write short notes on earthing design.  
(b) Explain the role of circuit breakers and their selection in the industrial installations.
- 5 (a) What is power factor? Explain the significance of power factor and its improvement.  
(b) Write short notes on optimal compensation.
- 6 (a) Explain the main characteristics of earthing systems.  
(b) Explain the selection criteria for earthing.
- 7 (a) Explain the disturbances caused by harmonics and also explain the methods to reduce the impact of harmonics.  
(b) Write short notes on power quality issues.
- 8 Write short notes on:
  - (a) Single payment compound amount (SPCA).
  - (b) Depreciation.

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