



Code: 13A02805

B.Tech IV Year II Semester (R13) Advanced Supplementary Examinations July 2018

DESIGN OF ELECTRICAL SYSTEMS

(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

1 Answer the following: (10 X 02 = 20 Marks)

- (a) What is electrical wiring?
- (b) What are high-rise building?
- (c) What are the earthing conductor materials?
- (d) What are the factors to be considered while selection of switch gear.
- (e) Why the frame of every electrical machinery is earthed.
- (f) State different types of earthing.
- (g) What do you mean by risk management?
- (h) What are the phases of design process for lightning protection systems?
- (i) Define uniform series compound amount.
- (j) What is future worth of a uniform series of amounts?

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2 Compare power distribution in small and large buildings.

OR

3 What are the tests to be carried out after completion of a domestic wiring before the supply can be switched on? How will you check the correct installation of the switches?

UNIT – II

4 Explain in detail about the importance protection coordination.

OR

5 Explain the role circuit breakers and their selection for protection of circuit elements and persons.

UNIT – III

6 Explain with the help of diagram, the measurement of earth resistance.

OR

7 Discuss in detail about the design consideration of earthing.

UNIT – IV

8 Explain the installation of down conductor with necessary schematic diagrams.

OR

9 Write short notes on "Lightning Protection Zones".

UNIT – V

10 Illustrate with an example of Uniform Series Compound Present Worth Model (USPW).

OR

11 Write short notes on the following:

- (a) Tax consideration.
- (b) After tax analysis.

