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Total No. of Printed Pages: 1

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B. Tech EE (Semester – 6th)
INDUSTRIAL ELECTRICAL SYSTEMS
Subject Code: BELED1611
Paper ID: 18111531

Time: 03 Hours

Maximum Marks: 60

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A

(2 marks each)

Q1. Attempt the following:

- a) State any two general rules for residential installation.
- b) Define following terms referred to illumination: (i) Space-height ratio (ii) Utilization factor
- c) List out steps for selections of transformer
- d) List out different types of UPS.
- e) Compare PCC and MCC panels
- f) Discuss Lumen, Candle Power, Lamp efficiency.
- g) State the various advantages of earthing system
- h) Write short note on Metering system and Tariff structure.
- i) List different types of protection components;
- j) What is Depreciation factor?

Section – B

(5 marks each)

- Q2. How selection of Cable and Switchgear is done in case Of industrial electrical systems?
- Q3. How specifications of LT breakers, MCB are decided in Industrial Electrical Systems?
- Q4. Discuss construction, working principle and operation of CFL and LED.
- Q5. State and explain single line diagram (SLD) of a wiring system.
- Q6. Define the following terms: (i) Contactor (ii) Isolator (iii) Relays (iv) MPCB (v) ELCB.

Section – C

(10 marks each)

- Q7. Distinguish between continuous power, prime power and standby power related with standby generator.
- Q8. Discuss, how load calculation and sizing of wire is (done) decided in case of residential and commercial wiring systems.
- Q9. Power factor correction is required in Industrial Electrical Substations, why?