

R18

Code No: 157CB

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, February/March - 2022

INDUSTRIAL ELECTRICAL SYSTEMS

(Electrical and Electronics Engineering)

Time: 3 Hours

Max. Marks: 75

Answer any five questions

All questions carry equal marks

1.a) What is an electric shock? What should you do if someone has had an electric shock?

Explain:

b) Explain in detail the location of switches and outlets used in the LT system. [7+8]

2.a) Is it necessary to use a fuse along with an MCB? How MCBs are different from circuit breakers used in power systems?

b) Write a short note on the Tariff structure. [8+7]

3.a) What is the difference between residential and commercial electrical systems? Explain.

b) How do you decide the rating of the main switch? Explain it with an example. [7+8]

4.a) Discuss about the various factors to be considered while deciding lighting scheme in a commercial building.

b) What is the function of a distribution board? And what are the protection devices installed in the distribution board? [8+7]

5. Explain the design of a lighting scheme for a residential and commercial premise with a suitable example. [15]

6.a) What are the various types of light sources available? Explain about the operation of any two lighting sources.

b) Explain the functional differences between LED and CFL. [9+6]

7.a) What is the difference between MCC and PCC panels?

b) Write the significance of power factor correction Industrial Electrical Systems. How can it be improved? Explain about any one method. [7+8]

8.a) List out the advantages and disadvantages of DG systems with respect to other types of backup scheme

b) Explain the working of offline, online, and line interactive UPS with block diagrams. [7+8]

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