

Eighth Semester B.E. Degree Examination, July/August 2022 Electrical Estimation and Costing

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Define Estimation. List the factors to be considered while preparing estimation. (06 Marks)
- b. Explain the responsibilities of estimator. (08 Marks)
- c. How to determine labour and material cost? (06 Marks)

OR

- 2 a. Explain purchase functions. (06 Marks)
- b. Explain the types of Tendering. (08 Marks)
- c. What are the guidelines for inviting tender? (06 Marks)

Module-2

- 3 a. Explain the properties of different cables used for domestic wiring. (06 Marks)
- b. Explain the general rules for internal wiring. (10 Marks)
- c. Determine the size of cable required to carry the maximum current of 50A. It is given the length of cable is 500 metres and allowable voltage drop is 5% of declared supply voltage. Declared voltage is 400V DC. (04 Marks)

OR

- 4 a. Define fusing factor. Explain different types of fuses. (06 Marks)
- b. Explain the types of conduits used in domestic wiring. (08 Marks)
- c. Explain the voltage grading of cable. (06 Marks)

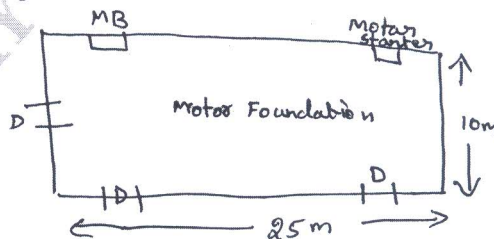
Module-3

- 5 a. What are various methods used for installation of overhead service lines? (10 Marks)
- b. List the merits and demerits of overhead service system. (06 Marks)
- c. What are the important consideration regarding motor installation wiring? (04 Marks)

OR

- 6 a. Explain the determination of
 - i) Rating of cables
 - ii) Rating of fuses in motor installation. (08 Marks)
- b. A 10HP 415V, 3phase, 50Hz induction motor is to be installed in a workshop, the plan of which is shown in Fig.Q.6(b). Estimate the quantity of material required and give its approximate cost. The wiring is to be surface conduit. (12 Marks)

Fig.Q.6(b)



Module-4

- 7 a. What are the types of insulators used in overhead lines? Explain them. (10 Marks)
b. Write a note on:
i) Lightning Arresters
ii) Phase plate
iii) Danger plate. (10 Marks)

OR

- 8 a. What are the points to be considered at the time of erection of overhead lines? (10 Marks)
b. Explain the following in brief:
i) Anti climbing device
ii) Bird guard
iii) Muffs. (10 Marks)

Module-5

- 9 a. Define substation, explain the classification of substation. (10 Marks)
b. List the materials used in substation and mention their specification. (10 Marks)

OR

- 10 a. Draw a typical single line diagram of a substation. (10 Marks)
b. Explain the methods of substation grounding. (10 Marks)
