

# CBCS SCHEME

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15EE553

## Fifth Semester B.E. Degree Examination, Jan./Feb. 2021 Electrical Estimation and Costing

Time: 3 hrs.

Max. Marks: 80

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

### Module-1

- 1 a. What is estimating and what are the importances of estimating and costing? (06 Marks)  
b. Write a short note on comparative statement. (06 Marks)  
c. State the important facts, which an estimator should know for preparing an internal wiring estimate. (04 Marks)

OR

- 2 a. List out guidelines for inviting tenders. (08 Marks)  
b. Briefly explain the modes of tendering. (08 Marks)

### Module-2

- 3 a. Mention the various types of wires or cables usually used in internal wiring of buildings. (06 Marks)  
b. Write a short note on General Specifications of cables. (06 Marks)  
c. Name the various accessories and fitting requires for conduit wiring. (04 Marks)

OR

- 4 a. What are the advantages and disadvantages of fuse? (06 Marks)  
b. What are the general rules to be followed for internal wiring? (10 Marks)

### Module-3

- 5 a. Write a short notes on service lines. (06 Marks)  
b. Prepare a list of material and estimate the cost for providing service connection to a single storey building at 240V single phase 50Hz having a light and fan load of 5kW. The supply is to be given from an overhead line 20m away from the building. (10 Marks)

OR

- 6 a. List out important consideration regarding motor installations. (06 Marks)  
b. A 10hp, 415V, 3-phase, 50Hz induction motor is to be installed in a workshop, the plan of which is shown below in figure 6(b). Estimate the quality of material required and give its approximate cost. The wiring is to be surface conduit.

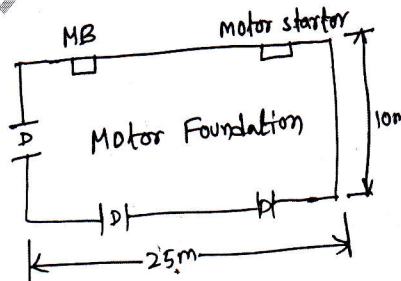


Fig Q6(b)

1 of 2

(10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.



**Module-4**

- 7 a. Draw and explain typical ac electrical power supply system. (06 Marks)  
b. Estimate the cost of adding 132KV bay at 132kV grid substation. (10 Marks)

**OR**

- 8 a. What are the main requirements of the line supports? Describe factors governing height to pole? (06 Marks)  
b. A pole for an overhead 11KV, 3-phase 50Hz line is required to be earthed and a stay is to be provided prepare a list of material required and estimate the cost. (10 Marks)

**Module-5**

- 9 a. List advantages and disadvantage of outdoor substation over indoor substation. (06 Marks)  
b. Draw a neat layout of 132/33kV substation having two 132KV incoming lines and four 33KV outgoing lines. Show the essential equipment in the diagram. (10 Marks)

**OR**

- 10 a. Explain the classification of substations. (06 Marks)  
b. Prepare a list of material required and workout the cost of installation of a 400KVA indoor type, 11/0.433KV transformer. (10 Marks)

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