

Q.22 List four components of a pole-mounted substation. (CO5)

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Estimate and draw layout for electrical installation of a double-storey building. (CO2)

Q.24 Prepare a tender notice performa for the purchasing of 20 numbers of 200 kv transformer 11kV/415 volts, 3 phase, 50 hz. (CO4)

Q.25 Draw the pole mounted substation of rating 200 kva, 11kv/415 volt. List the material required for the installation. (CO3)

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### 4th Semester/Electrical

**Sub.: Estimating & Costing in Electrical Engineering**

Time : 3 Hrs.

M.M. : 60

### SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 What is the full form of MCB used in domestic wiring? (CO2)

- a) Miniature Circuit Breaker
- b) Main Control Board
- c) Motor Circuit Breaker
- d) Manual Control Breaker

Q.2 Which document is submitted before finalizing a tender? (CO1)

- a) Quotation
- b) EMD
- c) Bill of Quantity
- d) Agreement

Q.3 Which wiring system is best suited for industrial use? (CO3)

- a) Cleat wiring
- b) Conduit wiring
- c) Batten wiring
- d) Casing capping wiring

- Q.4 Which is not a part of tender documents? (CO1)
- Layout drawing
  - Terms and conditions
  - Labour license
  - Schedule of work
- Q.5 What is the standard height of street light poles? (CO4)
- 3-4 meters
  - 4-6 meters
  - 6-9 meters
  - 10-12 meters
- Q.6 What is the capacity of a standard pole-mounted substation? (CO5)
- 50 kVA
  - 100 kVA
  - 200 kVA
  - 500 kVA

### SECTION-B

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 \_\_\_\_\_ method involves point-wise calculation for each electrical load point. (CO2)
- Q.8 The \_\_\_\_\_ is responsible for opening tenders on scheduled date. (CO1)
- Q.9 A sub-main wiring connects \_\_\_\_\_ to \_\_\_\_\_ . (CO2)
- Q.10 \_\_\_\_\_ is used to reduce voltage from high to low in substations. (CO5)

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- Q.11 A \_\_\_\_\_ is a comparison table of received quotations. (CO1)
- Q.12 The type of wiring mostly used in modern houses is \_\_\_\_\_ wiring. (CO2)

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Write any four overhead charges considered in estimation. (CO1)
- Q.14 Explain the procedure of market survey with four points. (CO1)
- Q.15 Compare cleat and batten wiring with two points each. (CO2)
- Q.16 List any four tools required for conduit wiring. (CO2)
- Q.17 List any four components used in three-phase motor installation. (CO3)
- Q.18 Explain any four IS rules related to domestic installation. (CO2)
- Q.19 Draw a neat layout for a 2 room residential wiring installation. (CO2)
- Q.20 Explain any four steps in preparing a tender document. (CO1)
- Q.21 Calculate the full load current for a 5HP, 3 phase, 415 volts Induction motor, assuming power factor 0.85 lagging. (CO4)

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