Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – April/May– 2017**

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| **Code :** | **15EE2026** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ELECTRICAL ESTIMATION AND COSTING** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| Q. No. | Sub Div. | Questions | Course  Outcome | Marks |
| 1. | a. | Design and draw a panel board to contain four switches, one 5A socket outlet and one fan regulator. The necessary switches and socket outlet are for flush mounting. The fan regulator is to be mounted on the board. The outer dimensions of accessories are as shown below. Use standard size (205 x 305). | CO3 | 14 |
| b. | List down the conditions to be noted when a panel board is being designed. | CO3 | 6 |
| (OR) | | | | |
| 2. | a. | Three light points each with one way switch are to be wired. Switches are to be provided in different places. Draw the following:   1. Schematic diagram 2. Wiring diagram in looping in system 3. Single line diagram 4. Wiring diagram in joint box system | CO3 | 14 |
| b. | List down the qualities of a good estimator. | CO3 | 6 |
| 3. |  | Draw a neat diagram showing the position of the switch boards, distribution boards and accessories with necessary connections in looping in system for a hall of 15m x 6m x 4.5m height. The hall is to be fitted with fan and light points. Make your own assumptions for the number of lights and fan points and other missing datas. Estimate the quantity of material and total cost for PVC wiring system. | CO1 | 20 |
| (OR) | | | | |
| 4. |  | Explain in detail the various systems of domestic and industrial wiring. | CO3 | 20 |
| 5. | a. | With neat diagram, explain the system of supply. Also, list down the advantages and disadvantages of each system. | CO3 | 14 |
|  | b. | Outline the general rules for wiring (Write any six). | CO2 | 6 |
| (OR) | | | | |
| 6. |  | Design and draw the electrical circuit and estimate the quantity of materials and their cost required for PVC casing-caping used in a house, the plan of which is shown below. Assume the height of ceiling as 3.6 metres and one plug point is to be provided in each room. | CO3 | 20 |
| 7. | a. | Give some extracts from Indian Electricity Amendment Rules-1972. | CO2 | 14 |
|  | b. | According to Indian Electricity Rules (Rule 52), what is mentioned regrding the frequency?. | CO2 | 6 |
| (OR) | | | | |
| 8. | a. | Discuss the importance of earthing. Mention the components of earthing system. | CO2 | 8 |
|  | b. | With necessary diagrams, explain the various types of earthing. | CO2 | 12 |
|  | | **Compulsory:** |  |  |
| 9. |  | Elaborate the testing for wiring installations. | CO2 | 20 |

ALL THE BEST