1485 **Code : 15EE54T**

Register Number | | | | | | | |

V Semester Diploma Examination, April/May-2018

ELECTRICAL ESTIMATION AND COSTING

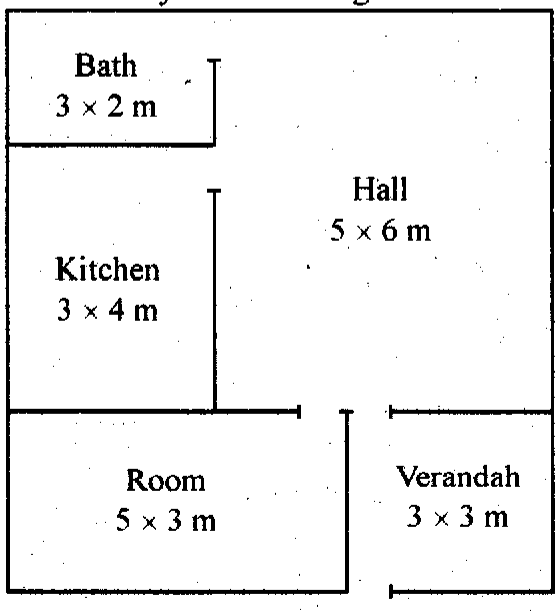
Time : 3 Hours] **[Max. Marks : 100**

Note : Answer **all** the questions.

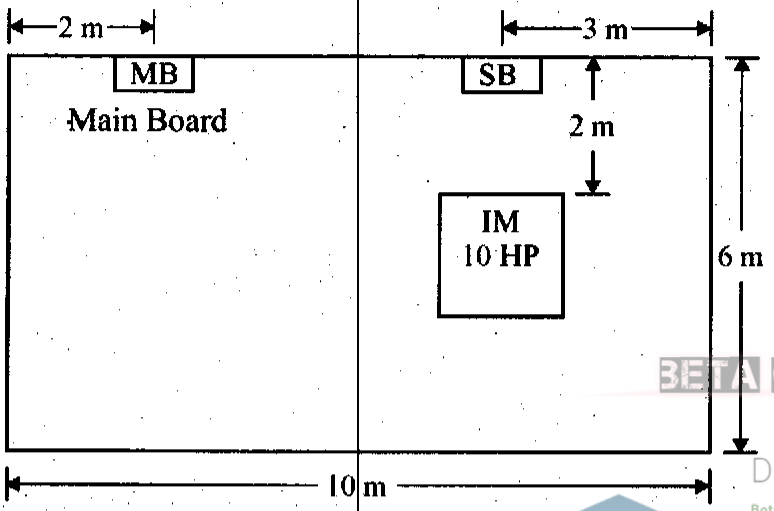
1. (a) Define estimation. List the importance of estimation. **5**
   (b) List the methods of reducing earth resistance. **5**

2. (a) Draw a neat diagram of underground service mains and label the parts. **5**
   (b) Prepare the schedule of materials for providing overhead service connection to a residential building having 1200 W lighting and 3 kW heating load. The supplier pole is 10 m away. Prepare the estimate of cost for the above. **15**

3. The accompanying sketch shows the plan of a residential building which has to be wired up as AEH installation with a heating load of 3 kW.
   (a) Prepare lighting load and the number of circuit.
   (b) Draw the wiring plan using standard convention.
   (c) Prepare the schedule of materials for lighting circuit.
   (d) Prepare the schedule of materials for hearing circuit.
   Note : Use concealed conduit system of wiring. **25**



4. In a workshop one 10 HP, 440 V, 50 Hz three phase induction motor is to be installed. Prepare schedule of materials required with a layout of the wiring. The plan of the workshop is shown below : **15**



Note : Use surface conduit system of wiring.

5. Draw the single line diagram of 100 kVA, 11 kV/415 volts, 3 phase 50 Hz distribution transformer centre indicating the rating of equipments. And prepare schedule of materials required for erection of above distribution transformer including all accessories on HT and LT side with specification. **5 + 15 = 20**

OR

A 11 kV feeder line is to be extended to a distance of 10 km. The line crosses highway and telephone line enroute and line has three deviations. Assume average span of 80 m and every 10^{th} pole to be anchored.

(a) Draw the toposheet of the route of the extended power line.

(b) Prepare schedule of materials required for extension of line.

6. Prepare schedule of materials required for running 100 km, 220 kV single circuit transmission line. Assume average span of 300 m. **10**

OR

Prepare the schedule of electrical equipment/materials required for erection of 5 mVA, 66 kV/11 kV substation with their specification.