

No. of Printed Pages : 4 180934/170934/120934  
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**3rd Sem. / Electrical, Power Station Engg., Elect.  
& Eltx. Engg.**

**Subject : Electrical Engineering Design and Drawing - I**

Time : 3 Hrs.

M.M. : 100

**SECTION-A**

**Note:** Very Short Answer type questions. Attempt any 15 parts out of 18 parts. (15x2=30)

Q.1 Draw the symbols of (CO-1&2)

- i) Earth point
- ii) Socket outlet 15A
- iii) Cartridge fuse
- iv) Ceiling fan
- v) Main switch power
- vi) Two way switch
- vii) Circuit breaker
- viii) Buzzer
- ix) Ac motor
- x) Energy meter
- xi) Ammeter
- xii) Moving Iron instrument
- xiii) Frequency meter

- xiv) Multimeter
- xv) Electrostatic screening
- xvi) NPN Transistor
- xvii) Spot light
- xviii) Fan Regulator

**SECTION-B**

**Note:** Attempt all questions.

Q.2 Draw the schematic and wiring diagram for controlling one lamp, one tube, one fan with regulator, one bell and one 6 Amp socket (with earth terminal) to be controlled by individual switches. (20)(CO-3&4)

OR

Draw the schematic, Wiring and single line diagram for double stair case wiring system by using appropriate switches.

Q.3 Draw the wiring diagram and single line diagram of a main panel of a residential building. The equipment to be installed on the panel includes one D.P. MCB, three SP. MCB's and one ELCB (Earth leakage circuit breaker). The wiring diagram should commence from single phase energy meter up to final sub circuits. (20)(CO-5)

Q.4 The isometric view of rotor of squirrel cage induction motor is shown in Fig.1 below. Draw the following views:

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(2) 180934/170934/120934  
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- a) Half sectional view  
 b) End view of rotor assembly (30) (CO-6)

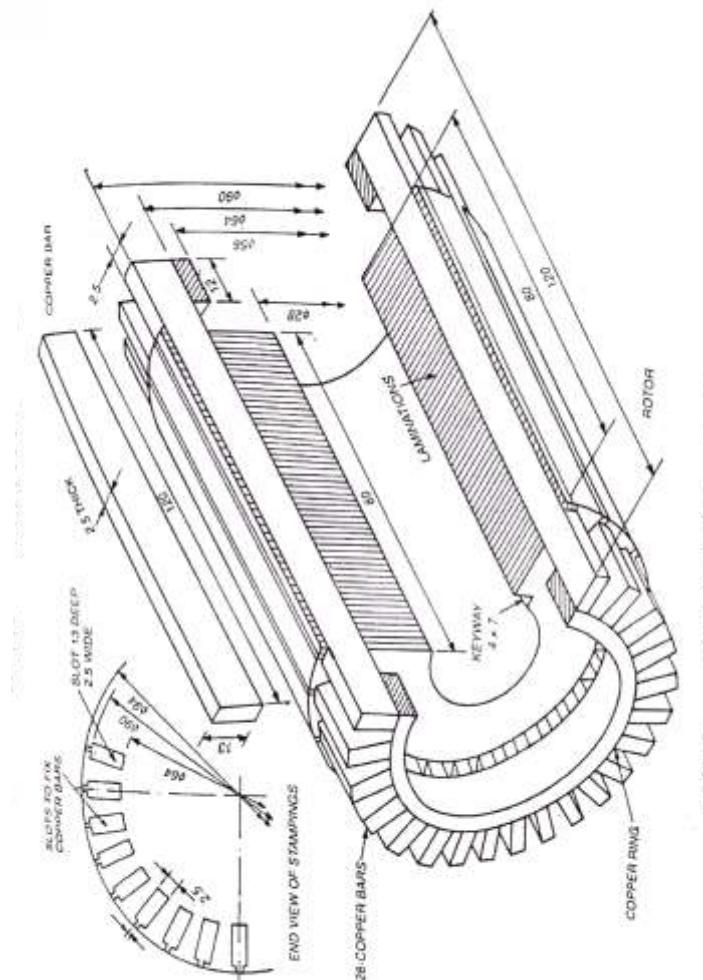


Fig.1

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OR  
 A Pin type Insulator with half sectional view with pins is shown in Fig.2. Assemble the pin is the insulator and Draw the following views:

- a) Front view      b) Top view

