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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:** Draw any ten symbols of the following. (10x2=20)

Q.1 Draw any ten symbols of the following.

- i) Main Switch (lighting)
- ii) DPIC
- iii) Neutral link
- iv) Rewireable fuse
- v) Exhaust fan
- vi) Two way switch
- vii) Socket outlet 3 pin 16A
- viii) Triple Pole MCB
- ix) Lamp
- x) Push button 'NO'
- xi) Time Delay relay
- xii) Buzzer

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**SECTION-B**

**Note:** Attempt any two questions out of three questions.  
(20x2=40)

- Q.2 Design and draw the single line, schematic and wiring diagram for a two electric bell (one for day and one for night) to be controlled by one push button.
- Q.3 Draw the wiring diagram for a staircase lightning system for a single light to be controlled from two locations.
- Q.4 Design and draw the wiring diagram of distribution panel for residential house. The circuit should consist of separate panels for lightning and power controls. Start the circuit from single phase energy meter, main switch. Show atleast four sub circuits on each lightning and power circuits.

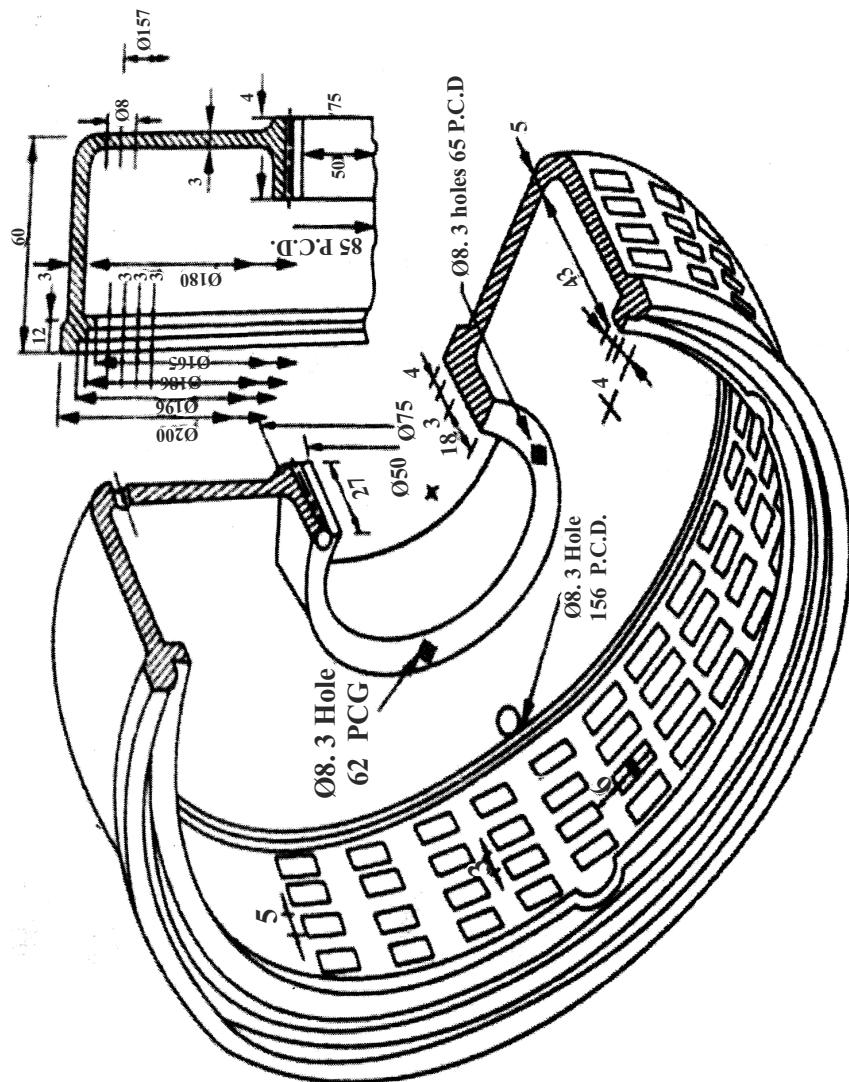
**SECTION-C**

**Note:** Attempt any one questions out of two questions.  
(40x1=40)

- Q.5 Draw the orthographic projection (half section view and end view) of Rotor of a squirrel cage induction motor as shown in fig.1.
- Q.6 Draw the orthographic projection of Pin type insulator as shown in fig 2.

(2)

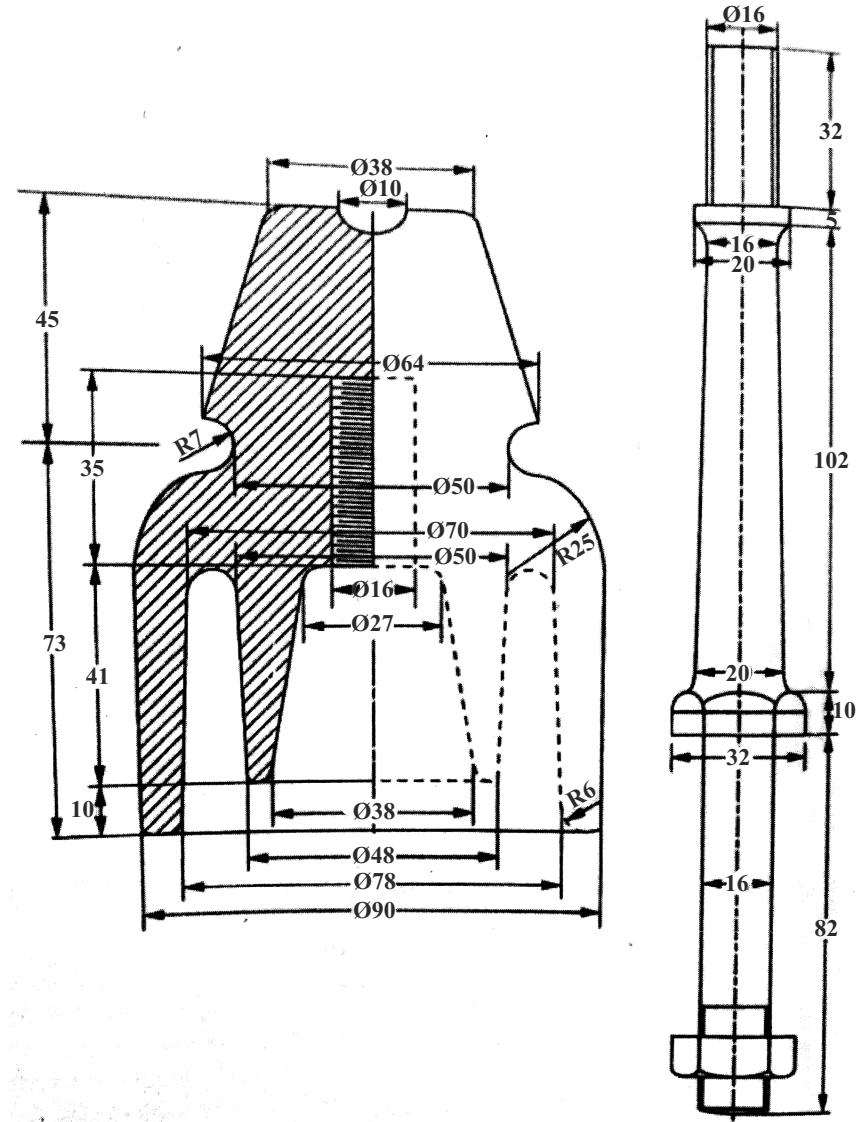
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**Fig 1:** Rotor of squirrel cage induction motor

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**Fig 2:** Pin type insulator

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