

No. of Printed Pages : 2                    180944/170944/120944  
Roll No. ..... /030944

**4th Sem / Elect., Power Station Engg., Elect. & Eltx. Engg  
Subject:- Electrical Engineering Design and Drawing - II**

Time : 3Hrs.                                M.M. : 100

**SECTION-A**

**Note:** All questions are compulsory.

- Q.1 i) What is the purpose of earthing? (CO2) 2 marks  
ii) What are the methods of reducing earth resistance? (CO2) 3 marks  
iii) Why are the metal frames of electrical apparatus earthed? (CO2) 5 marks  
iv) What is earth electrode and what are the types of electrode. (CO3) 5 marks
- Q.2 Draw the schematic and wiring diagram of Automatic Star Delta Starter for a three phase induction motor. (CO1) 25 marks

**OR**

What are the different types of earthing . Draw the diagram of plate earthing. Also provide the list of material used for plate earthing. (CO2)

(1)    180944/170944/120944  
            /030944

- Q.3 Draw the key diagram of 11 KV/440V substation along with symbols used for different equipment. (CO4) 20 marks
- Q.4 a) Explain the following Auto CAD Commands (CO5) 10 marks
- i) Line
  - ii) Arc
  - iii) Move
  - iv) Rotate
  - v) Trim
- b) Draw the schematic and wiring diagram of DOL starting of three phase induction motor (CO1) 10 marks

- Q.5 Draw the schematic and wiring diagram of sequential operation of two motors using time delay relay. (CO1) 20 marks

(2220)                                        (2)    180944/170944/120944  
            /030944