Total No. of Questions : 6] **SEAT No. :**

P5384 **[Total No. of Pages : 2**

T.E./Insem.-629
T.E. (Electrical)
EIMT

Time : 1 Hour] ***[Max. Marks : 30***

Instructions to the candidates:-

1) ***Answers Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Use of logarithmic tables slide rule, Mollier charts, electronic pocket calculator and steam tables is allowed.***
5) ***Assume suitable data, if necessary.***
6) ***Your answers will be valued as a whole.***

Q1) a) Explain General design consideration of the distribution feeder. **[4]**

b) A single phase distributor AB has R = 0.2 Ω and X = 0.3 Ω, at far end B. the voltage V_B is 240V and current 80A at pf 0.8 lagg. At mid-point. current is 100A at 0.6 pf lagging w.r.t. to voltage V_A at A. Find Supply voltage and Phase angle between V_A and V_B? **[6]**

OR

Q2) a) Explain the voltage level of Ring Type Distribution Feeder. **[3]**

b) Explain the difference between Overhead Transmission line and Underground transmission line based on volume of conductor? **[3]**

c) State and explain the Kelvin's Law? **[4]**

Q3) a) List the types of Bus Bar system? Explain any one. **[4]**

b) Explain the terms : **[6]**

i) Touch Voltage

ii) Step Voltage

OR

P.T.O.

Q4) a) Explain with the help of diagram Pipe Earthing. **[5]**

b) Explain with Diagram Peterson coil Grounding. **[5]**

Q5) a) Write short notes on following : **[6]**

i) Polarization Index.

ii) Dielectric absorption test.

b) Explain preventive maintenance of transformer. **[4]**

OR

Q6) a) Explain use of Thermography in power systems. **[4]**

b) Explain the factors affecting the life of Insulation. **[6]**