

Total No. of Questions :6]

SEAT No. :

P31

[Total No. of Pages :2

Oct./TE/ Insem. - 145

T.E. (Electrical)

ELECTRICAL INSTALLATION MAINTENANCE & TESTING

(2015 Pattern) (Semester-I)

Time : 1 Hour]

[Max. Marks :30

Instructions to the candidates:

- 1) *Neat diagrams must be drawn wherever necessary.*
- 2) *Black figures to the right indicate full marks.*
- 3) *Assume suitable data if necessary.*

Q1) a) Explain the factors needed to be considered in design of distribution feeders **[4]**

b) How the economic choice of conductor Size can be made using Kelvins Law and write its limitations **[6]**

OR

Q2) a) A Single phase ac distributor AB is 500 mt. long. Distributor is fed from point A and is loaded as **[6]**

- i) 100 A at 0.707 lagging power factor at 300 mt. at C from Point A
- ii) 200 A at 0.8 lag power factor at 500 mt. from Point A.

The power factors at both load points are referred to voltage at the far end

The Total Impedance of distributor is $(0.2+j 0.1) \Omega$ per km.

Calculate total voltage drop in the distributor.

b) Explain the following supply system in distribution. **[4]**

- i) Single phase two wire ac system
- ii) Three phase three wire ac supply system

P.T.O.

Q3) a) Explain neutral earthing with diagram. [5]

b) Explain with diagram single bus bar system with sectionalisation [5]

OR

Q4) a) Draw any five Symbols with their specification used in substation [5]

b) Explain touch voltage and step voltage [5]

Q5) a) Explain different Insulation stressing factors [4]

b) Write short note on following: [6]

i) Importance of Maintenance

ii) Preventive Maintenance of Induction Motor

OR

Q6) a) Explain planned and preventive maintenance of transformer [5]

b) What is Thermography? Explain its role in condition monitoring of electrical equipment [5]

