Total No. of Questions : 8]

SEAT No. :

P3376

[Total No. of Pages : 2

[5253] - 530
T.E. (Electrical)
ELECTRICAL INSTALLATION MAINTENANCE & TESTING
(2015 Pattern)

Time :2½ Hours] *[Max. Marks :70*

Instructions to the candidates:

1) ***Answer Q1 or Q2, Q3 or Q4, Q5 or Q6 and Q7 or Q8.***
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.***

Q1) a) Write the classification of AC Supply System. **[6]**

b) With neat sketch explain the single bus bar system with sectionalisation. **[6]**

c) Write short notes on following: **[8]**

i) Dielectric Absorption Ratio

ii) Thermography

OR

Q2) a) A single phase a.c. distributor AB of length 300 mt. has total impedance of $Z_{AB} = (0.2+j0.1)\ \Omega$ per km. With sending end at A , the distributor is loaded as under: **[8]**

i) at C, 200 mt. from A, 100A, at p.f 0.707 lag

ii) at B, 300 mt. from A , 200A, at p.f 0.8 lag

Load p.f are referred to far end B.

Calculate the total voltage drop in the distributor.

b) Explain Pipe Earthing with neat diagram. **[6]**

c) Explain insulation stressing Factors. **[6]**

Q3) a) Explain Failure modes of Transformer. **[6]**

b) Describe any one method of cable Fault Location. **[8]**

c) Explain Degree of Polymerization? **[4]**

OR

P.T.O.

Q4) a) Explain Motor Current Signature Analysis. **[6]**

b) Explain Dissolved Gas Analysis. **[8]**

c) Explain the IS/IEC standards for condition monitoring of transformer oil. **[4]**

Q5) a) Explain the Procedure of installation of Underground LT Service Line **[7]**

b) Explain how Schedule of Failure rate is made. **[4]**

c) How cable sizing is decided for particular application? Explain how Price Catalogue is referred for the same. **[5]**

OR

Q6) a) Explain the General Factors to be considered in estimation of HT/LT Lines. **[8]**

b) Describe how labour rates and schedule of rates are considered for estimating the data for laying of overhead lines. **[8]**

Q7) a) Explain the causes of Accidents. How they can be prevented? **[8]**

b) Write Down IE Act and Statutory Regulations for Electrical safety. **[8]**

OR

Q8) Write short notes on following: **[16]**

a) Contents of First Aid Box

b) Treatment for Electrical Shock

c) Danger Arising due to Failure of Insulation.

d) Objectives of Electrical Safety.