

Total No. of Questions : 8]

SEAT No. :

P-7564

[Total No. of Pages : 2

[6180]-78

T.E. (Electrical)

**ELECTRICAL INSTALLATION, DESIGN AND
CONDITION BASED MAINTENANCE
(2019 Pattern) (Semester - I) (303144)**

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6. Q7 or Q8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume suitable data if necessary.

- Q1)** a) State and explain the different failure modes of transformer. [8]
b) What is maintenance? State its importance and its advantages. [4]
c) Explain following Terms : [6]
i) Polarization Index
ii) Dielectric absorption ratio

OR

- Q2)** a) Explain Hot Line Maintenance with advantages and special types of non-conducting Materials used for tools for hot line maintenance. [4]
b) Short note on Motor Current Signature Analysis. [6]
c) Explain in detail the concept of degree of polymerization and dissolved gas analysis in case of transformer. [8]

- Q3)** a) Difference between quotation & tender. [3]
b) Write short notes on the following: [6]
i) Price catalogues
ii) Labor rates
c) What are the qualities of a good estimator? [8]

OR

P.T.O.

- Q4)** a) Write a short note on Guidelines for inviting tenders. [3]
b) Explain the purpose of estimating and costing? [6]
c) State the general factors to be considered in estimation of LT lines. [8]

- Q5)** a) Short note on Minimum permissible size of the conductor. [4]
b) Procedure to determine the size of conductor for lines? [6]
c) Explain various commercial wiring methods. [8]

OR

- Q6)** a) Explain the procedure of estimation of underground LT service line. [8]
b) Write short notes on the following: [6]
i) Current carrying capacity
ii) Voltage drop
c) Write down all rules for residential wiring work. [4]

- Q7)** a) Explain PAT Tester with applications. [8]
b) Write a short note on : [9]
i) Contents of first aid box
ii) Precautions to be taken to avoid accidents.
iii) Treatment for cuts, burns and electrical shock

OR

- Q8)** a) Explain four CAT ratings with respect to information, examples & measurements involved. [8]
b) Explain : [9]
i) Various objectives of electrical safety.
ii) Different methods of artificial respiration.
iii) Dangers arising due to failure of insulation of the equipment.

