Roll No. ....

24007

B. Tech. (Common for All Branches) 2nd Semester (Re-appear) Examination – October, 2020

ELECTRICAL TECHNOLOGY

Paper : EE-101-F

Time : 1.45 Hours]   [Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any *three* questions. All questions carry equal marks.

1. (a) Define bilateral and unilateral circuits.

    (b) Explain the physical significance of power factor in AC circuits.

    (c) Derive the e.m.f. equation of transformer.

    (d) Explain the term controlling torque in measuring instruments.

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2. (a) State and explain Ohm's Law.

    (b) Discuss Kirchhoff's Law in detail.

3. State and explain Thevenin theorem by taking example of some suitable D.C. circuit.

4. Derive and explain the mathematical equation for average value of sinusoidal signal.

5. Differentiate between series and parallel resonant circuits.

6. (a) Derive the power equation for 3-phase delta connected power system.

    (b) Explain the method of power measurement by two wattmeter in three phase power system.

7. Define voltage regulation. Derive the equation for voltage regulation of transformer at Inductive load.

8. Explain double field revolving theory in single phase induction motor.

9. Explain the construction & working principal of wattmeter.

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