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Total No. of Printed Pages: 1

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B. Tech Civil Engg. (Semester – 8th)

BASICS OF TRANSFORMERS

Subject Code: BELE0F95

Paper ID: [OE2110715]

Time: 03 Hours

Maximum Marks: 60

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A

(2 marks each)

Q1. Attempt the following:

- a) E.M.F. equation
- b) Open and short circuit tests
- c) Auto transformer
- d) Voltage Regulation
- e) Delta-star connection
- f) Bushings
- g) Winding
- h) Star-star connection
- i) Insulation
- j) Delta-delta connection

Section – B

(5 marks each)

- Q2. Differentiate between auto transformer and two winding transformer.
- Q3. What are the losses in a transformer?
- Q4. Explain the process of phase shifting from primary to secondary windings.
- Q5. Define various cooling techniques.
- Q6. Draw phasor diagram of under loaded and unloaded condition of single phase transformer.

Section – C

(10 marks each)

- Q7. Explain single phase transformer with applications of transformers.
- Q8. What is the effect of temperature on the performance of transformer? Explain Different types of insulating material used for transformer core.
- Q9. Define three phase transformer. Also explain Scott connection three phase to two phase conversion with the help of suitable diagram.