Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (EE/EEE) (Sem.–3)

MAGNETIC CIRCUITS & TRANSFORMERS

Subject Code : EE 203

Paper ID : [A0403]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. Write briefly :

a) Define mutual induction.

b) How eddy current losses can be reduced?

c) State Faraday's law of electromagnetic induction.

d) Define MMF & reluctance. Give their units.

e) What is meant by leakage reactance of transformer?

f) Define voltage regulation of transformer.

g) Why open circuit test is performed on low voltage side of transformer?

h) What are the advantages of autotransformer?

i) What are the disadvantages of open delta connection in 3-phase transformer?

j) Draw the connection diagram for Y-delta connection.

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SECTION–B

2) Find the relation for energy stored in magnetic fi

3) What is hysteresis? How hysteresis losses can b

4) Explain the principle & operation of autotransfor

5) Define efficiency & all day efficiency of transfo for max. efficiency of transformer.

6) What is the effect of saturation on exciting transformer?

SECTION–C

7) The maximum efficiency of a 500kVA, 3300/5 transformer is 97% and occurs at 3/4th full load is 10% calculate the regulation of full loaded, 0.

8) Explain the working principle of transformer and for induction loading of 1-phase transformer.

9) Draw and explain open delta connection. Co delta-delta connection.