

5. a) Develop the approximate equivalent circuit referred to primary side of transformer, and indicate how it differs from the exact equivalent circuit.
- b) The following tests were obtained on a 20KVA, 2200/220V, 50HZ single phase transformer.

OC test (LV side): 220V, 1.1 A, 125 watts

SC test 9 HV side): 52.7V, 8.4 A, 287 watts.

The transformer is loaded at unity factor on secondary side with a voltage of 220v. determine the maximum efficiency and the load at which it occurs.

Roll No. _____

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04BEE101

B.TECH.ELECTRICAL & ELECTRONICS ENGG.

IV- SEM Examination, May/June - 2016

SUB :ELECTRICAL MACHINES-I

Time : 3 Hours]

[Total Marks 60

Use of following supporting material is permitted during examination.

1. _____ Nil _____ 2. _____ Nil _____

Note: 1. Attempt any five questions.

2. Each question carry equal marks.

UNIT-I

1. a) Derive EME equation for a DC machine.
- b) Explain Armature reaction process.

OR

- a) Draw the power flow diagram for DC generator. Also discuss the constitution for maximum efficiency.