This document is a part of Main Course File	Document No.: CFM – 8

SARDAR VALLABHBHAI PATEL EDUCATION SOCIETY
MANAGED

N. G. PATEL POLYTECHNIC

ELECTRICAL ENGINEERING DEPARTMENT

ASSIGNMENT

Course Name (With Code): 4330901 - D C Machines and Transformers

Semester / Year: Third/Second

Assignment Number: 01

Assignment CO Number:4330901.1

Sr. No.	Questions related to Course Outcomes
Part – A	**Questions carrying 3 Marks**
1	Explain losses in DC generator.
2	Explain Back EMF in DC Motor.
3	Write Comparison Between Lap Winding & Wave Winding.
4	Explain the power stages of D.C. generator.
Part – B	**Questions carrying 4 Marks**
1	Describe the load characteristic of d.c. series generator.
2	Explain power stages & efficiency of D.C.Generator.
3	Describe Armature Reaction in DC Machine.
4	Explain load characteristics of D.C. shunt and series generator.
Part – C	**Questions carrying 7 Marks**
1	State the part of the d.c. generator and write the function of each

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Course Name (With Code): 4330901 - D C Machines and Transformers

Semester / Year: Third/Second

Assignment Number: 02

Assignment CO Number:4330901.2

Sr. No.	Questions related to Course Outcomes
Part – A	**Questions carrying 3 Marks**
1	State the necessity of starter in D C Motor.
2	State the application of d.c. motor.
3	Draw & explain starting characteristic of D.C. Series motor.
4	Explain Armature Control Method for Speed Control of DC shunt Motor.
Part – B	**Questions carrying 4 Marks**
1	Derive torque equation for D.C. motor.
2	Draw neat sketch of 3-point starter and explain in brief.
3	Derive torque equation for D.C. motor.
4	Explain electronic speed control of DC shunt motor.
Part – C	**Questions carrying 7 Marks**
1	Explain "Ward Leonard" method of voltage control in D.C. motor.
2	Explain Swinburn's test for D.C. motor. State its merits and demerits.

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Course Name (With Code): 4330901 - D C Machines and Transformers

Semester / Year: Third/Second

Assignment Number: 03

Assignment CO Number:4330901.3

Sr. No.	Questions related to Course Outcomes
Part – A	**Questions carrying 3 Marks**
1	Derive the Condition for Maximum Efficiency of Transformer.
2	What is Regulation of Transformer? Explain.
3	Derive EMF Equation of Single-Phase Transformer.
4	Write Short Note on Losses of Transformer.
Part – B	**Questions carrying 4 Marks**
1	Explain the working of Auto Transformer.
2	Explain the vector diagram of transformer for unity power factor.
3	Draw and explain Step-up and Step-down transformer.
Part – C	**Questions carrying 7 Marks**
1	Draw and explain vector diagram of transformer on lagging, leading and unity power factor.

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Course Name (With Code): 4330901 - D C Machines and Transformers

Semester / Year: Third/Second

Assignment Number: 04

Assignment CO Number:4330901.4

Sr. No.	Questions related to Course Outcomes
Part – A	**Questions carrying 3 Marks**
1	Why the transformers are connected in parallel?
2	Write the Condition for parallel operation of Transformer.
Part – B	**Questions carrying 4 Marks**
1	Explain Sumpner test or back-to-back test in transformer.
2	Explain Advantages and disadvantages of autotransformer.
Part – C	**Questions carrying 7 Marks**
1	Explain O.C. & S.C. test to find efficiency of transformer.
2	Explain the direct load test of transformer to find efficiency and voltage regulation.

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