

Sub-EC- 01  
Assignment -01  
DC Generator

1. Construction and working of a simple dc generator.
2. What are the important parts and their functions of a dc generator.
3. What are the types of dc winding and where it is used.
4. Define pole pitch and coil pitch.
5. Compare lap winding and wave winding.
6. Briefly explain armature reaction.
7. What are the effects of armature reaction.
8. Define commutation.
9. Briefly explain commutation with neat sketch.
10. Write short notes on compensating winding.
11. Write short notes on losses in a dc machine.
12. Derive the condition for maximum efficiency in a dc generator.
13. Explain various methods of improving commutation.
14. What is critical resistance.
15. Need of parallel operation of dc generator.

Sub-EC 01

Assignment -02

DC Motor

1. Briefly explain working of DC motor.
2. Write down the significant of back emf.
3. derive the condition for maximum power in dc motor
4. Briefly explain the classification of dc motor
5. what is speed regulation dc motor.
6. draw the power stage of dc motor.
7. write a short note on
  - A) characteristics of shunt motor
  - b) characteristics of series motor.
  - c) flux control method.
  - d) armature control method.
8. write the application of following m/c
  - 1) dc series motor
  - 2) dc series generator
  - 3) dc shunt motor
  - 4) dc shunt generator.
  - 5) dc compound motor.
9. Discuss the necessity of starter in dc motor.

Sub-EC 01  
Assignment -03  
Transformer

1. What do you mean by ideal transformer .
2. Derive the emf equation of transformer.
3. what is voltage transformation ratio.
4. what is voltage regulation in transformer .
5. write short notes on.
  - 1) open circuit test
  - 2) short circuit test
6. Derive the condition for maximum efficiency in transformer
7. what do you mean by all day efficiency
- 8..difference between core type and shell type transformer.
- 9.why transformer rating is done in KVA.
- 10.why cooling of transformer is necessary and how it can be cooled.
- 11.what is the difference between a power transformer and distribution transformer
- 12.explain the maintenance schedule of power transformer.

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Assignment -04

Auto-Transformer

- 1.state the advantages and disadvantages of auto transformer.
- 2.Discuss the comparison between auto transformer and ordinary two winding transformer.
- 3.explain the copper saving in auto-transformer.

Sub-EC 01  
Assignment -05  
Instrument Transformer

1. compare CT&PT
2. state the application of ct and pt

