Q.19 States different applications of a synchronous motor.

Q.20 Write some advantages of three phase supply over single phase supply.

Q.21 Write down merits and demerits of a servo motor

Q.22 What do you understand by voltage regulation of a transformer?

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Describe the different methods of excitation of a DC motor.

Q.24 Derive the expression of an induced EMF in a rotating coil.

Q.25 What is current transformer, explain its working with constructional details.

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3rd Sem / Instrumentation and control Engineering

Subject:- Electrical Machines

Time : 3Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 The purpose of the transformer core is to provide _____

a) Low reluctance path b) High inductive path

c) High capacitive path d) High reluctance path

Q.2 In field current is decreased in a shunt dc motor, the speed of the motor

a) Remains the same b) Increases

c) Decreases d) None of the above

Q.3 Slip-rings in a synchronous motor carry-

a) Direct current b) Alternating current

c) No current d) All of the above

Q.4 Flux produced in the rotor of the three-phase induction motor is due to

a) Induction principle b) Conduction principle

c) PM principle d) Lorenz law

Q.5 What are the two main types of servo motors?

a) AC and DC

b) Stepper and brushless

c) Permanent magnet and variable reluctance

d) Linear and rotary

Q.6 A DC generator without commutator is a

a) AC generator b) DC motor

c) DC generator d) Induction motor

SECTION-B

Note: Objective/Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Define Copper loss in a transformer.

Q.8 What is stepper motor?

Q.9 What is armature windings?

Q.10 Define a generator.

Q.11 What do you understand by torque?

Q.12 Write a difference between rotor and a stator.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 What is the necessity of a starter for a DC machine?

Q.14 Show the construction of a DC motor with various parts.

Q.15 What is mean by instrument transformer and also write about its types.

Q.16 How revolving magnetic field is generated at the stator while applying three phase supply?

Q.17 Write the functions for commutator for motoring action.

Q.18 Briefly explain the operation of three phase induction motor.