

SE-IV | Electrical Technology & ^{INST} Instruments

03.12.14



QP Code : 12479

[Total Marks : 30]

(3 Hours)

- N. B. (1) Question No. 1 is compulsory.
(2) Answer any **Three** out of remaining **five** questions.
(3) Assume suitable data if required and mentioned it.

Q.1 SOLVE ANY FOUR

20

- State different types of d.c. generators and state the application of each type.
- Which part of d.c. machine is laminated? Why?
- A 250 V d.c shunt motor takes a line current of 20 A. resistance of shunt field winding is 200Ω and resistance of armature is 0.3Ω . Find the armature current and back emf.
- List the different between squirrel cage rotor and slip ring rotor.
- What are the sources of error in case of Wheatstone bridge?

Q.2 a) A 250 V d.c. shunt motor has a shunt field resistance of 200Ω and an armature resistance of 0.3Ω . For a given load, motor runs at 1500 r.p.m. drawing a current of 22 A from the supply. If a resistance of 150Ω is added in series with field winding, find the new armature current and speed. Assume load torque constant and magnetization curve linear.

10

b) Explain the operation of three point starter with neat sketch.

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[TURN OVER

- Q. 3 a) A 24 pole, 50 Hz star connected induction motor has rotor resistance of 0.016Ω per phase and rotor reactance of 0.265Ω per phase at standstill. It is achieving its full load torque at a speed of 347 r.p.m. calculate the ratio of
- 1) load torque to maximum torque
 - 2) Starting torque to maximum torque
- b) List the various losses that take place in an induction motor
- Q. 4 a) why single phase induction motors are not self starting
- b) Explain general construction of single phase induction motor
- Q. 5 a) Describe the construction and working of PMMC instrument
- b) Derive the bridge balance equation for the basic a.c. bridge
- Q. 6 a) Explain the basic principle of ADC
- b) With suitable block diagram explain Digital volt meter

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SoE / sem IV / EIT /

Course : S.E (ELECTRONICS & TELECOMMUNICATION) (SEM IV)
(CBSGS)



Q.P Code : 12485

Correction :

CORRECTION:

1. Question No 1 is compulsory
2. Solve any three out of remaining

Query Update time : 03/12/2014 03:45 pm

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