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5th Sem / Branch : Elect. Power Station Engg., Elect & Eltx. Engg.

Sub.: Electrical Machines - II

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 Which motor is generally used in tape recorders. (CO4)

a) Hysteresis motor b) Split phase motor
c) Reluctance motor d) Universal motor

Q.2 The condition which allows the torques to be taken care for choosing a synchronous motor is/are?(CO3)

a) Starting torque b) Pull in torque
c) Pull out torque d) All of the mentioned

Q.3 The V-Curves of synchronous motor is plotted between_____ (CO3)

a) Ia Vs If with constant shaft load
b) If Vs Ia with constant shaft load
c) Power factor vs if
d) Power factor vs la

Q.4 Which among the following are the applications of synchronous motors? (CO3)

a) Compressors
b) Blowers
c) Fans
d) Compressors, Fans, Blowers

Q.5 The stator core of a 3-phase induction motor is laminated in order to reduce the (CO1)

a) Eddy current loss
b) Hysteresis loss
c) Both eddy current and hysteresis I loss
d) Weight of the stator

Q.6 The rotor winding for a 3-phase slip ring induction motor having delta connected stator must be connected in (CO1)

a) Delta
b) Star
c) Delta or star according to need
d) None of the above

Q.7 Power developed by a synchronous motor will be maximum when the load angle is (CO2)

a) Zero b) 45°
c) 90° d) 120°

Q.8 The machine that supplies d.c. to the rotor of an alternator is called the (CO2)

a) Rectifier b) Exciter
c) Convertor d) Inverter

Q.9 The function of a starter is (CO1)

a) To start the motor
b) To start and stop the motor
c) To limit the starting current
d) To Limit the applied voltage

Q.10 Which type of motor is used in celling fan (CO2)

a) Shade pole
b) universal motor
c) Permanent capacitor start
d) Capacitor start capacitor run

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 In electric clock_____ motor is used. (CO2)

Q.12 Synchronous motors run at ____ speed. (CO3)

Q.13 What is stepper motor? (CO4)

Q.14 Write down the full form of LIM? (CO4)

Q.15 What is a universal motor? (CO4)

Q.16 Define coil span factor. (CO3)

Q.17 What is a starter? (CO2)

Q.18 Rotor of an alternator has ___ slip rings. (CO1)

Q.19 The frequency of voltage generated in large alternator in India is ____ (CO1)

Q.20 Over excited synchronous motor behaves like a _____ (CO3)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Synchronous machine is also called synchronous condenser, when and why. (CO3)

Q.22 Explain the working of D.O.L. starter. (CO1)

Q.23 Write a short note on the double cage induction motor. (CO1)

Q.24 How does a synchronous motor start? (CO3)

Q.25 Explain the advantages of squirrel cage induction motor. (CO1)

Q.26 Discuss the causes of Hunting. (CO3)

Q.27 Explain working of Universal motor. (CO4)

Q.28 Derive an expression for induced e.m.f. for an alternator. (CO3)

Q.29 Explain why the stator core of an alternator is laminated. (CO3)

Q.30 Write down various applications of induction motors. (CO1)

Q.31 Write a note on the capacitor start and run motor. (CO2)

Q.32 Draw and explain V-curves of a synchronous machine. (CO3)

Q.33 Compare the squirrel cage and phase wound induction motor. (CO1)

Q.34 Explain working principle & application of linear induction motor. (CO4)

Q.35 What do you mean by cogging and crawling in a 3-phase induction motor? (CO1)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Explain the working of split phase motors in details. (CO2)

Q.37 Discuss the construction and working of synchronous motors with a diagram. (CO3)

Q.38 Explain different types of speed control methods of induction motor. (CO1)

Note: Course outcome (CO) mentioned in the question paper is for official purpose only.