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5th Sem / Branch : Electrical Engg., 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 IN three phase induction motor, the rotor current is produced by (CO-4)

a) Induction effect b) Lenz's law
c) Rotor supply d) None of these

Q.2 The term cogging is associated with ____ motor (CO-8)

a) Induction b) Repulsion
c) dc Series d) dc shunt

Q.3 In induction motor, the open circuit test is ____ test. (CO-4)

a) Stator Resistance b) Blocked Rotor
c) No-Load d) Short CKT

Q.4 When the induction motor is standstill the slip is (CO-4)

a) Zero b) One
c) Infinity d) None of the above

Q.5 For ceiling fans, generally the single phase motor used is (CO-9)

a) Split phase motor
b) Capacitor start motor
c) Capacitor start & run motor
d) Permanent capacitor type

Q.6 The synchronous speed (Ns) is given by (CO-2)

a) 180f/p b) 120f/p
c) 60f/p d) None of above

Q.7 The emf generated in three phase alternator are ____ electrically degree apart (CO-1)

a) 60 degree b) 90 degree
c) 120 degree d) 180 degree

Q.8 The machine that convert mechanical energy in to electrical energy is called (CO-1)

a) Rectifier b) Generator
c) Excitor d) Motor

Q.9 In synchronous machine, the stator frame is made up of (CO-1)

a) Silicon steel
b) CRGOS
c) Cast Iron
d) Laminated silicon steel

Q.10 The frequency of voltage generated in large alternator in India is (CO-1)

a) 0 HZ b) 50 HZ
c) 220 HZ d) 60 HZ

SECTION-B

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

Q.11 The value of slip is ___ at the time of standstill.(CO-4)

Q.12 The field of a synchronous motor is excited from ____ Source. (CO-2)

Q.13 The losses of induction motor are _____ and _____. (CO-4)

Q.14 Define Slip. (CO-4)

Q.15 Universal motor can work on ____ and____supply. (CO-9)

Q.16 Over excited synchronous motor working at no load behave like a ____. (CO-2)

Q.17 Write down the full form of LIM. (CO-9)

Q.18 The yoke of the induction motor is made up of_____. (CO-4)

Q.19 Define synchronous speed. (CO-4)

Q.20 Hunting of synchronous motor can be minimized by using ____ winding. (CO-2)

SECTION-C

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

Q.21 Explain the working principle of synchronous alternator. (CO-1)

Q.22 Write down the condition for parallel operation of alternators. (CO-1)

Q.23 Describe the concept of cogging and crawling. (CO-8)

Q.24 Derive the torque equation for three phase induction motor. (CO-9)

Q.25 Explain how to make single phase induction motor self starting. (CO-9)

Q.26 Explain the working of stepper motor and its application. (CO-10)

Q.27 Draw and explain the torque slip curve for three phase induction motor. (CO-6)

Q.28 Draw and explain the V-Curve for synchronous motor. (CO-2)

Q.29 Derive an expression for induced e.m.f. of an alternator. (CO-1)

Q.30 Explain the working of Hysteresis motor and its application. (CO-9)

Q.31 What are the different losses in induction motor? (CO-4)

Q.32 What is hunting and how it can be minimized? (CO-2)

Q.33 Write the short note on split phase motor. (CO-9)

Q.34 Compare the squirrel cage and phase woundinduction motor. (CO-4)

Q.35 What are the various application of Synchronous motor. (CO-2)

SECTION-D

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

Q.36 Explain the construction, principle and working of three phase induction motor. (CO-4)

Q.37 Explain the concept of armature reaction for synchronous alternator in detail. (CO-1)

Q.38 List the various method of speed control for three phase induction motor. Explain anyone method in detail. (CO-6)