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5 Sem.,
Branch : Elect, Power Station Engg., Elect & Eltx. Engg.
Subject : Electrical Machines-II

Time : 3 Hrs. **M.M. : 100**

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (10x1=10)

Q.1 The two important parts of an induction motor are (CO4)

a) Stator and Rotor b) Slip rings & Brushes
c) Core & Winding d) Shaft & Ball bearing

Q.2 The frame of an induction motor is made of (CO4)

a) Aluminium b) Silicon Steel
c) Cast Iron d) Bronze

Q.3 In induction motor, the short circuit test is _____ test. (CO4)

a) No-Load b) Blocked Rotor
c) Stator Resistance d) Open Circuit

Q.4 An induction motor is said to be crawling when (CO8)

a) It runs at one seventh of rated speed
b) It accelerates too fast
c) It is subjected to fluctuating loads
d) It is started on full load

Q.5 For ceiling fans, induction motor used is (CO9)

a) Split phase motor
b) Capacitor start motor
c) Capacitor Start and run motor
d) Permanent Capacitor type

Q.6 _____ winding is used for self-starting of synchronous motor. (CO2)

a) Field b) Armature
c) Damper d) None of above

Q.7 For a full pitch winding, the induced e.m.f. in both coil sides are (CO4)

a) Additive b) Subtractive
c) In quadrature d) Shaft and ball bearing

Q.8 The machine that supplies D.C. to the rotor of an alternator is called the (CO1)

a) Rectifier b) Excitor
c) Convertor d) Invertor

Q.9 The armature reaction is the effect a armature flux(CO1)

a) On te main field flux b) On the speed of alternator
c) Both A & B d) None of these

Q.10 The alternator are rated in (CO1)

a) KVA b) KW
c) MW d) Horse power

Section-B

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

Q.11 At Stand Still, The value of slip is _____. (CO4)

Q.12 The field winding of a synchronous motor is excited from _____ Source. (CO1)

Q.13 Define synchronous speed. (CO1)

Q.14 An induction motor always operates at _____ Power factor. (CO4)

Q.15 The speed of rotor of an induction motor is always _____ synchronous speed. (CO6)

Q.16 Over excited synchronous motor working at no load is called_____. (CO2)

Q.17 Write down the full form of LIM. (CO10)

Q.18 In clock _____ motor is used. (CO10)

Q.19 Define Slip. (CO5)

Q.20 Hunting in a synchronous motor can be minimized by using _____ winding. (CO2)

Section-C

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

Q.21 Explain the working principle of three phase induction motor. (CO4)

Q.22 Write down the conditions for parallel operation of alternators. (CO1)

Q.23 Describe the concept of cogging and crawling. (CO8)

Q.24 Explain the Development of torque in three phase induction motor. (CO4)

Q25 Explain the methods of starting of single phase induction motor. (CO9)

Q.26 Explain the working of stepper motor and its white applications. (CO10)

Q.27 Draw and explain the torque vs slip curve for three phase induction motor. (CO6)

Q.28 Write short note on double cage induction motor. (CO7)

Q.29 Derive the induced e.m.f. equation of an alternator. (CO1)

Q.30 Write down various applications of synchronous motor. (CO2)

Q.31 Mention the different types of losses occur in induction motor? (CO4)

Q.32 Write a short note on universal motor and its uses. (CO2)

Q.33 Write the short note on capacitor start capacitor run motor. (CO9)

Q.34 Compare the salient and non salient type rotor of synchronous alternator. (CO1)

Q.35 Explain the concept of armature reaction for synchronous alternator. (CO1)

Section-D

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

Q.36 Explain the construction, principle and working of a synchronous machine. (CO1)

Q.37 Explain the construction and working of shaded pole motor. (CO9)

Q.38 List the various method of starting for three phase induction motor. Explain anyone method in detail with neat diagram. (CO5)