

**4th Sem.  
Branch : Electrical  
Sub. Electrical Machines-II**

**Time : 3 Hrs.**

**M.M. : 60**

**SECTION-A**

**Note: Multiple type Questions. All Questions are compulsory. (6x1=6)**

**Q.1 What is the frequency of DC? (CO1)**

- a) 60 hz
- b) 0 hz
- c) 25 hz
- d) 50 hz

**Q.2 The value of slip at synchronous speed is (CO2)**

- a) 0
- b) 1
- c) 2
- c) 0.5

**Q.3 The stator frame of induction motor is made of (CO3)**

- a) Cast iron
- b) Silicon steel
- c) Nickel
- d) Silver

**Q.4 The Universal motor can work on (CO4)**

- a) AC
- b) DC
- c) AC & DC
- d) NONE

**Q.5 The capacity of 3-f Induction motor will so (CO2)**

- a) KV
- b) KVA
- c) HP
- d) None of above

**Q.6 The maximum synchronous speed of motor for 50Hz frequency. (CO2)**

- a) 750RPM
- b) 1500 RPM
- c) 3000 RPM
- d) None of above

**SECTION-B**

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

**Q.7 Define Armature reaction. (CO1)**

**Q.8 Define stator. (CO2)**

**Q.9 Define power factor. (CO1)**

**Q.10 The condition for maximum efficiency of 3-f Induction motors variable losses. (CO4)**

**Q.11 Define hunting. (CO1)**

**Q.12 Define slip. (CO1)**

### **SECTION-C**

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

- Q.13 Explain concept of distribution and coil span factor. (CO1)
- Q.14 Explain production of magnetic field in single phase induction motor brief. (CO3)
- Q.15 Discuss the concept of cogging in induction motor. (CO2)
- Q.16 Explain in brief methods of speed control of 3-f Induction motor. (CO3)
- Q.17 Explain in brief synchroscope method of synchronization of alternator with bus bar (CO2)
- Q.18 Write applications of 1-phase induction motor. (CO3)
- Q.19 Explain working of 3 phase induction motor. (CO2)
- Q.20 Discuss and draw the Torque-Slip curve of 3-f Induction motor. (CO2)
- Q.21 Explain the working of stepper motor. (CO4)
- Q.22 Write a short note on universal motor? (CO4)

### **SECTION-D**

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

- Q.23 Explain the construction of single phase induction motor. (CO3)
- Q.24 Discuss about starting methods of 3 phase synchronous motors. (CO1)
- Q.25 Make a list of methods of starting of 3-f Induction motor. Explain any one with neat diagrams. (CO2)