Q.27 What do you mean by cogging & crawling in a 3pase Induction motor. (CO4)

Q.28 Explain anyone method of starting of a synchronous motors. (CO5)

Q.29 Draw and explain V-Curve of synchronous motor. (CO5)

Q.30 Explain the working of a Universal motor? (CO6)

Q.31 Write a note on split phase Induction motor. (CO6)

Q.32 Derive the e.m.f. equation of an alternator. (CO7)

Q.33 Mentions some of the application of a stepper motor. (CO8)

Q.34 What is a servo motor? Classify various types of servo motor. (CO8)

Q.35 Explain why the stator core of an alternator is laminated? (CO7)

SECTION-D

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

Q.36 Describe the construction & working of synchronous motor with diagram? (CO5)

Q.37 Explain the construction & working of 3 point starter. (CO3)

Q.38 Explain the various characteristic of DC series motor. (CO3)

(Note Course outcome / CO is for office use only)

Roll No. .....

4th Sem.

Branch : Mechatronics

Sub. DC & AC Machines

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

SECTION-A

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

Q.1 The relation between line voltage and phase voltage in star connection- (CO1)

a) $V_L = V_{ph}$ b) $V_L = 3V_{pH}$

c) $V_L = \sqrt{3}V_{ph}$ d) None

Q.2 Which circuit is used for a unity power factor (CO1)

a) Capacitive b) Inductive

b) Resistive d) None

Q.3 DC generator work on the principle of (CO2)

a) Fleming L.H.R. b) Fleming R.H.R.

c) Faraday's law of EMI d) None

Q.4 Rating of motor is in- (CO3)

a) KV b) KVAr

b) KVA d) H.P.

Q.5 Yoke of DC motor is made of (CO3)

a) Copper b) Carbon

c) Cast Iron d) Silicon steel

Q.6 Which of the following motor has high starting torque (CO3)

a) DC shunt b) DC series

c) Both d) None of these

Q.7 Speed of the motor can be varied by (CO3)

a) By varying field current

b) By varying armature resistance

c) By varying supply voltage

d) All of the above

Q.8 For a ceiling fan's generally the single phase induction motor is used. (CO6)

a) Shaded pole

b) Capacitor start

c) Capacitor start & capacitor run

d) Permanent capacitor start

Q.9 Value of slip of an induction motor at the time of start (CO4)

a) 0 b) 1

c) 0.5 d) 2

Q.10 Shaft of alternator is made of (CO7)

a) Silicon steel b) Mild steel

c) Brass d) Cast Iron

SECTION-B

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

Q.11 Universal motor can work on _____ and _____ supply. (CO6)

Q.12 DC shunt motor is a _____ speed motor. (CO3)

Q.13 Define the Armature reaction? (CO3)

Q.14 Brushes of DC motor are made of_____. (CO5)

Q.15 Overexcited synchronous motor working at no load behaves like a _____. (CO3)

Q.16 Machine that converts electrical energy into mechanical energy is called_____. (CO3)

Q.17 Why starter is necessary in DC motor? (CO3)

Q.18 Hunting in a synchronous motor can be minimized by using ____ winding. (CO5)

Q.19 Gives the expression of %slip =. (CO4)

Q.20 1-Phase AC series motor is designed to operate high speed. (True/False) (CO6)

SECTION-C

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

Q.21 What is the relation between line voltage, Current & Phase voltage, current in star connection. (CO1)

Q.22 Compare the difference between motor and generator. (CO2)

Q.23 Explain the different types of DC motor? (CO3)

Q.24 Explain the working of a DC generator? (CO2)

Q.25 Write the methods of speed control of DC series motor. Explain anyone? (CO3)

Q.26 Writes down the various application of Induction motor. (CO4)