

(CO-4)

- Q.31 What are the basic components of microprocessor block diagram? (CO-4)
- Q.32 Write a note on engine's starter. (CO-5)
- Q.33 Explain the air pressure gauges used in an automobile. (CO-1)
- Q.34 Describe the principle of D.C. generator. (CO-2)
- Q.35 Explain the working of electric door locks. (CO-3)

### Section-D

- Note:** Long answer Questions. Attempt any two Questions out of three Questions. (2x10=20)
- Q.36 Explain the basic electrical system of an automobile with the help of a circuit diagram. (CO-1)
- Q.37 Explain the construction and working of Lithium ion battery. (CO-3)
- Q.38 Describe the construction and working of A.C. generator. (CO-4)

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Roll No.....

6th Sem,

**Branch :** Instrumentation and Control Engg.

**Subject :** Auto Electrical

**Time :** 3 Hrs.

**M.M. :** 100

### SECTION-A

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

- Q.1 Acid used in automotive battery is \_\_\_\_\_. (CO-1)
- a) Hydrochloric acid    b) Hydrofluoric acid  
c) Dilute nitric acid    d) Sulphuric acid
- Q.2 Engine dynamo is usually driven by \_\_\_\_\_. (CO-1)
- a) Chain drive    b) Gear drive  
c) Flate belt drive    d) V-belt drive
- Q.3 Signalling system includes \_\_\_\_\_. (CO-2)
- a) Tail lamp    b) Brake light  
c) Door light    d) All of the option
- Q.4 When fully charged, the specific gravity of the acid in a battery is usually \_\_\_\_\_. (CO-2)
- a) 0.74    b) 0.84  
c) 1.28    d) 1.0
- Q.5 Which one is not used in automobiles? (CO-3)
- a) Speedometer    b) Voltmeter  
c) Fuel gauge    d) Wattmeter
- Q.6 Engine starter motor is \_\_\_\_\_. (CO-3)
- a) Single phase A.C. Motor  
b) D.C. Series motor

- c) D.C. Shunt motor  
d) D.C. compound motor
- Q.7 What are the main circuits in an auto electrical system? (CO-5)  
a) Starting circuit      b) Lighting circuit  
c) Ignition circuit      e) Generator circuit
- Q.8 In battery ignition system, the voltage across the spark gap is \_\_\_\_\_ (CO-1)  
a) 12V      b) 120V  
c) 1200V      d) 12000V
- Q.9 The door lock system functions are \_\_\_\_\_ (CO-2)  
a) Lock and unlock the door  
b) Key confine prevention  
c) Security  
d) All of the options
- Q.10 Speedometer is used in an automobile for \_\_\_\_\_ (CO-3)  
a) Measuring the distance  
b) Speed of the vehicle  
c) Both A & B  
d) None of the above

### Section B

**Note:** Objective types Questions. All Questions are compulsory. (10x1=10)

- Q.11 What is the purpose of direction signal lights? (CO1)  
Q.12 What is the purpose of the cadmium test?  
Q.13 What is the source of electrical energy in an automobile? (CO-2)

- Q.14 What is the function of seat adjusters? (CO-3)  
Q.15 What is mean by the separator defects? (CO-1)  
Q.16 What is the function of power windows in an automobile? (CO-4)  
Q.17 What is the purpose of the grid? (CO-1)  
Q.18 What is the purpose of the voltage regulator? (CO3)  
Q.19 What mean by the wiring hardness? (CO-5)  
Q.20 What is the function of defroster? (CO-4)

### Section-C

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

- Q.21 What are the various types of earthing in an automobile? (CO-1)  
Q.22 Name the various types of battery testing. (CO-5)  
Q.23 Write a simple note on battery defect. (CO-1)  
Q.24 What is cable colour code in wiring an automobile? (CO-2)  
Q.25 How does the microprocessor work explain with diagram? (CO-2)  
Q.26 With the help of a neat sketch, describe a warning light. (CO-4)  
Q.27 Explain the working principle of any one starting motor and generator of an automobile. (CO-3)  
Q.28 Explain the working of speedometer. (CO-3)  
Q.29 Write the various type trouble usually occur in a battery. (CO-5)  
Q.30 Write the construction of three unit regulators.