

- Q.30 What is the difference between battery and magneto ignition system? (CO4)

Q.31 What are various indicators and warming lights in Automobiles? (CO4)

Q.32 What is Starter Drive? What are types of starter drives in Automobiles? (CO3)

Q.33 What is voltage regulator? Describe principle construction and working of voltage regulator. (CO4)

Q.34 What are Various sensors used in Automobiles ? Explain one in detail. (CO5)

Q.35 What is Head lamp? What are various types of Head lamps used in Automobiles? (Co6)

## **SECTION-D**

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

- Q.36 Explain with neat sketch explain wiring diagram of a modern car. What are various circuits in wiring diagram? (CO5)

Q.37 What is Alkaline Battery? Explain various types of Alkaline battery in detail? (CO2)

Q.38 Explain with neat sketch Battery Ignition System use in Automobiles? (CO3)

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

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# **5th Sem / Automobile Engineering**

## **Subject:- Automotive Electrical and Electronics System**

Time : 3Hrs. M.M. : 100

## **SECTION-A**

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

- Q.1 At the start of the engine, the charging voltage is (CO1)

  - a) Lower
  - b) Higher
  - c) Same
  - d) Zero

Q.2 What is maintenance-free battery? (CO2)

  - a) A battery having lead antimony plate grid.
  - b) A battery having lead calcium plate grid.
  - c) A battery does not contain acid.
  - d) A battery does not contain water.

Q.3 The capacity of a battery is usually expressed in terms of (CO2)

  - a) Volts
  - b) Amperes
  - c) Weight
  - d) Ampere Hours

Q.4 The acid used in automobiles battery is (CO2)

  - a) Hydrochloric acid
  - b) Hydrofluoric acid
  - c) Nitric acid
  - d) Sulphuric acid

- Q.5 With the increase of battery temperature, the specific gravity of electrolyte (CO2)  
 a) Increase      b) Decrease  
 c) Remains the same    d) None of these
- Q.6 The cause of Defective wiper may be (CO4)  
 a) Wire disconnected    b) Loose connection  
 c) Blown      d) Dirty switch contact
- Q.7 Thermocouple sensor is used for measuring (CO6)  
 a) Pressure      b) Temperature  
 c) Load      d) Volume
- Q.8 The value of Specific gravity of acid when a lead acid battery is fully charged is (CO3)  
 a) 1.285      b) 2.185  
 c) 2.385      d) None of the above
- Q.9 Fuel gauge indicates fuel level in (CO5)  
 a) Filter      b) Carburettor  
 c) Tank      d) Nozzle
- Q.10 Dynamo in an Automobile is a (CO3)  
 a) series generator    b) shunt generator  
 c) both a and b    d) none of the above

### **SECTION-B**

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

- Q.11 In buses \_\_\_\_\_ Volt Battery is used. (CO1)
- Q.12 What is the purpose of Odometer in an Automobile? (CO5)

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- Q.13 Write one method of testing of battery. (CO2)
- Q.14 ECU stand for \_\_\_\_\_. (CO6)
- Q.15 Electrolyte Used in Lead Acid Battery is \_\_\_\_\_. (CO2)
- Q.16 Write the function of Horn in Automobiles.
- Q.17 Define Earthing. (CO1)
- Q.18 Meaning of Overheating is \_\_\_\_\_. (CO4)
- Q.19 In Automobiles Red colour wire indicates \_\_\_\_\_ wire (CO6)
- Q.20 Symbol of Fan used in Automobiles is \_\_\_\_\_ (CO4)

### **SECTION-C**

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

- Q.21 Write various specifications of Battery. (CO1)
- Q.22 Write short note on Fuel cells used in Automobiles. (CO3)
- Q.23 What are starting requirements of SI. engine. (CO3)
- Q.24 Explain Hydrometer test for Batteries. (CO4)
- Q.25 Write various defects in Automobiles Battery.(CO2)
- Q.26 Write charging and Discharging Equation of Lead Acid Battery. (CO2)
- Q.27 What are common faults and remedies of Lighting system in Automobiles. (CO5)
- Q.28 Write short note on Electric Vehicles. (CO6)
- Q.29 What are Hybrid vehicles? Explain hybrid vehicles with diagram. (CO5)

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