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220353A

5th Sem. /Automobile
Subject : Auto Electrical Systems & Electric Vehicles

Time : 3 Hrs.

M.M. : 60

SECTION-A

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

- Q.1 The specific Gravity of Acid in a fully charged Battery is generally (CO2)
a) 1.00 b) 1.28
c) 1.82 d) 2.81
- Q.2 Fuel gauge indicates fuel level in (CO5)
a) Filter b) Carburettor
c) Tank d) Nozzle
- Q.3 The positive plate of lead acid battery has (CO2)
a) Lead peroxide (PbO_2)
b) Spongy Lead (pb)
c) Lead sulphate (PbSO_4)
d) Sulphuric acid (H_2SO_4)
- Q.4 The acid used in automobile battery is (CO2)
a) Hydrochloric acid b) Hydrofluoric acid
c) Nitric acid d) Sulphuric acid

- Q.5 ECU stands for (CO2)
 a) Electronic control unit
 b) Electric control unit
 c) Both A & B
 d) None of the above
- Q.6 In scooters _____ Volt Battery is used. (CO6)
 a) 6V b) 12V CO-1
 c) 24V d) None of the above

Section-B

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

- Q.7 In Hyundai creta _____ volt battery is used. (CO1)
 Q.8 What is the purpose of indicator in Automobiles? (CO6)
 Q.9 Write one Fault of Lighting system. (CO5)
 Q.10 Function of Fog light used in Automobiles is ____ (CO5)
 Q.11 Write one defect in Automobile Battery. (CO2)
 Q.12 Symbol of Horn used in Automobiles is _____. (CO4)

Section-C

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

- Q.13 Write down the function of (CO6)
 (1) Ignition Coil (2) Distributor
 (3) Spark plug (4) None

- Q.14 Explain construction and working of Ni-Fe Alkaline battery. (CO2)
 Q.15 What is the difference between Electric vehicles and Hybrid Vehicles. (CO4)
 Q.16 Write construction and working of fuel cell with diagram. (CO2)
 Q.17 Write a short note on Lighting system used in Automobiles. (CO5)
 Q.18 Write a short note on electric vehicles. (CO6)
 Q.19 Compare Lead Acid Battery with Alkaline Battery. (CO2)
 Q.20 Explain the term Air Conditioning in Automobile Explain with diagram. (CO5)
 Q.21 Write charging and Discharging Equations of Lead Acid Battery. (CO2)
 Q.22 Explain steering system in automobiles. (CO6)

Section-D

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

- Q.23 What are various methods of testing of battery? Explain each in detail. (CO2)
 Q.24 Explain with neat sketch working of Lead-acid batteries in Automobiles? (CO2)
 Q.25 Explain the term Air conditioning in Automobile Explain with diagram. (CO5)