No. of Printed Pages : 4
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220353A

5th Semester/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 capacity of battery is expressed in term of

a) Volts b) Ampere

c) Ampere Hour d) Weight

Q.2 Electrolyte used for alkaline battery is

a) KOH b) HCL

c) H_2SO_4 d) NaCl

Q.3 Techometer is used for measurement of

a) RPM b) Distance

c) Speed d) Fuel consumption

Q.4 Specific gravity of fully charged lead acid battery cell is

a) 1.100 b) 1.280

c) 2.180 d) 1.170

Q.5 Number of cells in 6V battery are

a) 4 b) 5

c) 3 d) 6

Q.6 Ignition coil is used to

a) Step up current b) Step up voltage

c) Step down current d) Step up power

SECTION-B

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

Q.7 Write full form of LED.

Q.8 In India negative earthing is adopted in automobile. (True/False)

Q.9 Write full form of HT & LT cable.

Q.10 Give function of starting motor.

Q.11 Write use of dipper.

Q.12 Cut out relay is the part of _____ system.(Charging / Starting /Ignition)

SECTION-C

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

Q.13 Write the names and functions of various electrical systems of automobile.

Q.14 Describe discharging reaction of lead acid battery.

Q.15 Draw circuit diagram of charging system.

Q.16 Write function of head lamp and fog lamp

Q.17 Explain need of voltage regulation in charging system.

Q.18 Describe concept of plug is hybrid vehicle (PHEV)

Q.19 Describe specific gravity testing of electrolyte by hydrometer.

Q.20 Write the names of sensors used in MPFI system.

Q.21 Name five names of Electric Vehicles available in India market.

Q.22 Describe working of lithium ion battery.

SECTION-D

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

Q.23 Explain principle, working and construction of lead acid battery in detail.

Q.24 Describe construction and working of bendix drive with neat diagram.

Q.25 Explain principle, working and construction of alternator in detail.