

- Q.31 Describe cut out relay. (CO-7)
 Q.32 Describe fog light. (CO-7)
 Q.33 Draw and label circuit of Wiper. (CO-7)
 Q.34 Explain trickle charging. (CO-7)
 Q.35 Describe hybrid vehicle. (CO-7)

SECTION-D

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

- Q.36 Explain construction and working of Lead acid battery with neat sketch. (CO-2)
 Q.37 Explain with neat sketch explain wiring diagram of a modern car. (CO-3)
 Q.38 Explain construction and working of heavy duty regulator. (CO-4)

Note : Course Outcome (CO) mentioned in the question paper is for official purpose only.

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Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 The most commonly type secondary cell used in practices is (CO-1)
 a) Iron nickel cell b) Nickel cadmium cell
 c) Lead acid cell d) Silver cadmium cell
- Q.2 In lead acid battery separators are provided to (CO-1)
 a) Reduce tendency for polarization
 b) Facilitate flow of current
 c) Reduce internal resistance
 d) Avoid internal short circuit
- Q.3 Value of specific gravity of fully charged battery (CO-3)
 a) 1.285 b) 2.185
 c) 2.385 d) 2.585
- Q.4 The power factor of alternator depends on (CO-2)
 a) Speed of rotor b) Load
 c) Core loss d) Armature loss

- Q.5 As the speed of alternator increases (CO-2)
 a) The frequency increases
 b) The frequency decreases
 c) The frequency remain same
 d) None
- Q.6 Magneto is used in (CO-5)
 a) Scooter b) Truck
 c) Tractor d) Bus
- Q.7 Thermocouple sensor is used for measure (CO-1)
 a) Pressure b) Temperature
 c) Load d) Volume
- Q.8 The starting torque of a single phase induction motor is (CO-6)
 a) Uniform b) High
 c) Low d) Zero
- Q.9 Field coils are made of (CO-6)
 a) Copper b) C.I.
 c) Steel d) Carbon
- Q.10 In three core cable colour of Neutral is (CO-4)
 a) Red b) Yellow
 c) BLue d) Grey

SECTION-B

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

- Q.11 Define sensor. (CO-4)

- Q.12 What is a overcharged battery? (CO-3)
- Q.13 What is the effect of temperature on battery? (CO-2)
- Q.14 What is the function of a regulator? (CO-5)
- Q.15 What is electric fuel pump? (CO-6)
- Q.16 LED stands for? (CO-4)
- Q.17 Describe need of heater in a car. (CO-6)
- Q.18 Define horn in a vehicle. (CO-3)
- Q.19 What is the colour of tail light of a car. (CO-2)
- Q.20 Name two types of battery. (CO-1)

SECTION-C

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

- Q.21 Battery is the heart of electrical system is an automobile. Explain. (CO-1)
- Q.22 Explain maintenance free battery. (CO-2)
- Q.23 Write advantages of alternator over dynamo. (CO-3)
- Q.24 Explain starting motor principle. (CO-5)
- Q.25 Explain constructional details of headlamp. (CO-6)
- Q.26 Explain windscreen and rear wipers in an automobile. (CO-6)
- Q.27 Explain working of ECU in a vehicle. (CO-4)
- Q.28 Enlist five battery defects. (CO-2)
- Q.29 Explain earthing system in an automobile. (CO-1)
- Q.30 Explain electric vehicle. (CO-7)