

- Q.30 What are the function of the following accessories:  
 a) Mirrors                      b) Sunvisors  
 c) Sliding roof                d) Winch
- Q.31 What are the basic components of microprocessor with block diagram?
- Q.32 Explain the function of the active and passive night vision system.
- Q.33 Describe working and principle of DC generator.
- Q.34 Define the following terms:  
 a) Power window  
 b) Vehicle tracking system  
 c) Central locking facilities
- Q.35 Describe briefly, the main features of any concept of solar car.

#### SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 With the help of suitable sketches explain and construction working of lead acid battery.
- Q.37 Explain clearly the type of regulation required in case of alternators and describe various type of regulator for the same.
- Q.38 Write a short note on :  
 a) Charging system of automobile  
 b) Lighting system of automobile

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**6th Sem / Branch : IC**  
**Sub.: Auto Electrical**

Time : 3Hrs.

M.M. : 100

#### SECTION-A

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

- Q.1 What is an automobile?  
 a) Self propelled vehicle  
 b) Used for carrying passengers and goods on the ground  
 c) Contain the power source for its propulsion  
 d) All the mention
- Q.2 The unit of brake power is \_\_\_\_\_  
 a) Kilo Newton                b) Kilo watt  
 c) Kilo pascal                d) Kilo Newton meter
- Q.3 The colour of +ve plate of a lead acid battery \_\_\_\_\_  
 a) Brown                      b) Grey  
 c) White                      d) Black
- Q.4 An alternator frame is made of \_\_\_\_\_  
 a) Cast iron                    b) Brass watt  
 c) Aluminum                  d) Copper
- Q.5 Automatic starting motors are \_\_\_\_\_  
 a) Series wound                b) Series shunt wound  
 c) Shunt wound                d) Both A & B

- Q.6 The two quantities used for specifying and electric wire are \_\_\_\_\_
- The colour and length
  - The length and diameter
  - The diameter and number of strands
  - Colour and diameter
- Q.7 The frequency of light per minute flashing in a direction indicator is about \_\_\_\_\_
- 8
  - 80
  - 800
  - None of these
- Q.8 Can stands for \_\_\_\_\_
- Control area network
  - Control air network
  - Control are network
  - None of these
- Q.9 Odometer is an instrument used for measurement of \_\_\_\_\_
- Power
  - Fuel consumption
  - Engine RPM
  - Distance
- Q.10 The two rows of cylinder in a 'V' type engine are generally arranged at \_\_\_\_\_
- 45 degree
  - 60 degree
  - 90 degree
  - 130 degree

### SECTION-B

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

- Q.11 What are the function of a frame?
- Q.12 What is the electrolyte used in lead acid battery?

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- Q.13 What are the main requirements of the vehicle charging system?
- Q.14 State the function of a coasting air valve. (CAV)
- Q.15 How does the fuel injection help to reduce automobile pollution?
- Q.16 Name different lights used in modern car?
- Q.17 What is an "Autronic" eye?
- Q.18 What is temperature gauge?
- Q.19 Name any two automobile essential accessories?
- Q.20 Why do we use a relay in the horn circuit?

### SECTION-C

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

- Q.21 Define the terms of:
- Plate earthing
  - Pipe earthing
  - Rod earthing
- Q.22 Discuss in detail 'on board diagnostic' for automobile.
- Q.23 Describe in detail the method of battery charging.
- Q.24 What is high discharge test? What is open volt test?
- Q.25 Discuss in detail the procedure for trouble shooting in case of an alternator.
- Q.26 How is the temperature compensation are achieved in combined vibrating voltage and current regulator.
- Q.27 What is the difference between HT and LT.
- Q.28 Draw a simplified wiring circuit for the lighting systems of car and discuss the same.
- Q.29 Compare the fresh air and recirculating type of a car heaters.

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