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Time : 1½ Hours

**AUTOMOBILE**

Subject Code

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Total No. of Questions : 3

(Printed Pages : 6)

Maximum Marks : 30

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**INSTRUCTIONS** : (i) Answer each question on a fresh page.

(ii) Write the question number and sub-question number clearly.

(iii) All questions are compulsory.

(iv) Figures to the right indicate full marks.

1. (A) Choose the *correct* answer from the options given below the statement : 3

(1) More Engine Power is consumed in ..... Valve mechanism.

(a) OHV

(b) OHC

(c) HOC

(d) COV

(2) Valves in 4 Stroke I.C. Engines space ..... Valves.

(a) Poppet

(b) Radial

(c) Axial

(d) Tappet

- (3) EGR Vacuum modulator is located on the .....
- (a) Firewall
  - (b) Cylinder head
  - (c) Fuel common rail
  - (d) Intake hose
- (4) Device used to force more air in the combustion chamber is known as .....
- (a) Intercooler
  - (b) EGR
  - (c) Turbocharger
  - (d) Exhaust Valve
- (5) In Automatic Transmission, the ..... takes place of a clutch.
- (a) Axial Convertor
  - (b) Radial Convertor
  - (c) Thrust Convertor
  - (d) Torque Convertor
- (6) Propeller shaft transmits power from ..... to rear axle.
- (a) Differential
  - (b) Engine
  - (c) Gear box
  - (d) Clutch

- (B) Answer the following questions in *one* sentence each : 3
- (1) Why manufacturer develops the service manual ?
  - (2) Mention any *two* contents of service manual.
  - (3) Name any *two* sensors used in MPFI Engines.
- (C) Answer the following questions in *two* sentences each : 4
- (1) State any *four* advantages of MPFI Engines.
  - (2) Mention any *two* functions of Differential.
2. (A) Choose the *correct* answer from the options given below the statement : 3
- (1) The most compact and more advantageous clutch is a ..... clutch.
    - (a) Spring
    - (b) Diaphragm
    - (c) Multiplate
    - (d) Centrifugal
  - (2) Backlash is a gap between two meshing teeth of bevel pinion and ..... wheel.
    - (a) Crown
    - (b) Star
    - (c) Planet
    - (d) Sun

- (3) Distance between center of front axle and center of rear axle is called .....
- (a) King pin inclination
  - (b) Wheel track
  - (c) Wheel Base
  - (d) Length of car
- (4) Tilting of front wheel outward at the top with reference to vertical axis is called ..... Camber.
- (a) Negative
  - (b) Positive
  - (c) No
  - (d) Neutral
- (5) The specific gravity of a battery when tested was between 1.260-1.280, this indicates that the battery is .....
- (a) Fully charged
  - (b) Half charged
  - (c) Discharged
  - (d) About to run down
- (6) Resistance is measured with the help of .....
- (a) Voltmeter
  - (b) Ammeter
  - (c) Ohmmeter
  - (d) Tachometer

(B) Answer the following questions in *one* sentence each : 3

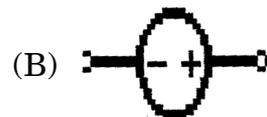
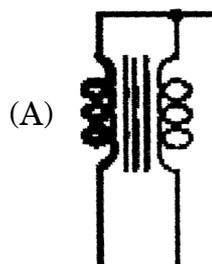
- (1) Name *two* types of piston rings used in a piston of automobile.
- (2) In case of improper wheel base, how does it effect the vehicle ?
- (3) Define wheel wobbling.

(C) Answer the following questions in *two* sentences each : 4

- (1) Explain wheel alignment.
- (2) List any *four* steps taken while inspecting an automotive battery.

3. (A) Answer the following questions in *one* sentence each : 3

- (1) What is Caster angle ?
- (2) State any *two* tools used to diagnose electrical problems in automobiles.
- (3) Identify the following Auto Electrical symbols given below :



(B) Answer the following questions in *two* sentences each : 4

- (1) List any *four* components of ignition system of an Automobile.
- (2) Name any *four* types of cables used in auto electrical system.

(C) Answer the following question :

3

Identify the below given circuit diagram and name the parts marked with alphabets.

