

DEPARTMENTAL EXAMINATION OF IAS/HAS OFFICERS OF
HIMACHAL PRADESH
August, 2005

Paper-12

Motor Mechanism and Driving

Time : 3 Hours

Maximum Marks:100

- Note: 1. Candidates may answer the questions in Hindi or English.
2. Attempt any five questions from part- A and five from Part-B.
3. Bare Act is allowed.

PART- A

Q.No.1 Explain the functions of any five of the following in a Motor Vehicle:-

- a) Hand brake.
- ii) Exhaust pipes.
- iii) Wind screen wiper.
- iv) Rear view mirror.
- v) Tyres.
- vi) Differential.
- vii) Clutch.
- viii) Front Axle.
- ix) Speedometer.

2x 5 = 10

Q.No.2 I) Explain the functions of leaf springs fitted in an automobile.
ii) Draw a rough sketch of an automobile vehicle indicating therein the different sub—assemblies (aggregates) of a vehicle.

5 x2 = 10

Q.No.3 What is meant by exhaust emission? Name the different pollutants emitted by The vehicle which are harmful to the human beings. Also suggest measures To control exhaust emission of an automobile vehicle.

10

Q.No.4 Explain the following:-

- b) Blow by.
- ii) Horse Power.
- iii) Torque.
- iv) Laden and un- laden weight.
- v) Power weight ratio.

2x 5 = 10

Contd.P-2

Q.No.5 Fill in the blanks with appropriate words:-

- i) The substance.....Carries the weight of an automobile vehicle.
 - ii) Spark plugs are used in.....engine.
 - iii)Controls the temperature in an engine.
 - iv) Fan.....air to cool the radiator water and engine.
 - v) Electricity can be stored in the form of.....energy .In an automobile, the Components used for storage is known as.....

 - vi) oxygen.....in burning of fuel inside the engine.
 - vii)helps to revolve the outer and inner wheels at different speeds.
 - viii) Firing order of four cylinder engine is.....
 - ix) In an automobile alternator generates.....
 - x) The strength of a tyre depends upon.....
- 10

Q.No.6 Explain the function of any five of the following:-

- i) Fuel injection pump.
- ii) Propeller shaft.
- iii) Fuel gauge.
- iv) Hubs.
- v) Steering.
- vi) Mounting pin.
- vii) king pin.
- viii) Silencer.

2 X 5 = 10

PART-B.

- Q.No.1 What do you understand by preventive maintenance? How the maintenance of A vehicle helps in reducing air pollution menace?
10
- Q.No.2 Explain briefly constitution. Role. Powers and functions of Motor Accident Claim Tribunal and State Transport Appellate Tribunal.
10
- Q.No.3 Why insurance of Motor vehicle is necessary? Explain briefly relevant Provisions with regard to insurance of motor vehicle contained in Motor Vehicles Act,1988.
10
- Q.No.4 Why Registration of motor vehicle is necessary? Where motor vehicle can be Registered and also indicate Authorities competent to Register Motor Vehicles in H.P.
10

Contd.P-2

-2 -

Q.No.5 Explain briefly constitution.role. and functions of Regional Transport

Q.No.6 What do you understand by the following terms:-

- a) Certificate of Registration.
- b) Articulated vehicle.
- c) Educational Institution Bus.
- d) Invalid carriage.
- e) Maxi Cab.
