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**H.P. BOARD OF DEPARTMENTAL EXAMINATION
DEPARTMENTAL EXAMINATION OF IAS/HAS OFFICERS OF
HIMACHAL PRADESH
NOVEMBER 2019**

Paper: 12

Motor Mechanism and Driving.

Time : 1:30 hours

Maximum Marks-50

Note:-

1. Candidate may answer the question in Hindi or English.
2. Attempt all question from Part-A and five from Part- B.
3. Bare act is allowed.

Part-A

Q. No 1 Explain the function of any five in the motor vehicle.

(1x5=5)

- a) Battery
- b) Turbo Charger
- c) Tube less tyres
- d) Wind screen wiper.
- e) Clutch
- f) Axle shaft.
- g) Mounting pin
- h) Crown wheel.

Q. No II Attempt any five questions.

2x5=10)

- a) Difference in front and rear wheel drive.
- b) Explain blow by.
- c) Explain the function of Shackle Pin.
- d) Explain the function of Engine foundation.
- e) Explain briefly working of engine cooling system.
- f) Define ABS in break system.
- g) State four advantages of power steering used in an automobile.
- g) Function of rotary pump.

(VII) Engine torque is the highest at

- a) High Speed
- b) Intermediate speed
- c) Low speed

(VIII) The device for smoothing out the power impulses from the engine is called

- a) Flywheel
- b) Camshaft
- c) Clutch
- d) None of above

(IX) The piston compression ring are made of

- a) Bronze
- b) Aluminum
- c) Cast Iron
- d) steel

X) The operation of removing trapped air from the hydraulic breaking system is known as:

- a) trapping
- b) Bleeding
- c) Tapping
- d) Cleaning

XI) The power actually developed inside the engine cylinder is called:-

- a) Break power
- b) Frictional Power
- c) Indicated Power
- d) None of above

(XII) The oil pump is driven by the:-

- a) Crankshaft via driven belt
- b) Camshaft
- c) Alternator shaft
- d) Crankshafts directly

Part-B

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Q. No IV As per provision of the motor vehicle Act, define any five of the following (1x5=5)

- a) Maxi cab
- b) Stage carriage
- c) Route permit
- d) Tourist vehicle
- e) Contract carriage
- f) Educational Institution Bus
- g) HTV , LMV

Q .No V What is the role of two authorities? (2.5x2=5)

- a) State Transport Authority
- b) Motor Accident claims Tribunal.
- c) Registering & Licensing Authority.

Q. No VI a) What is the difference between Stage carriage and contract carriage.

b) What is temporary permit?

(2.5x2=5)

Q. No VII) What do you understand by five of the following

(1x5=5)

- a) Modification of route
- b) Extension of route
- c) Diversion of route
- d) Curtailment of route
- e) Restoration of route
- f) Corridor

Q.No VIII) What are the essential document and tools required to kept always with vehicle during operation?

(5)

Q.NO IX) Under what circumstance driving License can be suspended and cancelled?

(5)

Q.NO X) Why Insurance of vehicle is necessary and what is the effect of Non- Insurance of Motor Vehicle?

Which of the Motor vehicle can be exempted from Insurance and by whom?

(5)