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October 2014

Time – Three hours
(Maximum Marks: 75)

[N.B: (1) Answer any fifteen questions in PART - A and division (A) or division (B) of each question in PART - B.

(2) Each question carries 1 (one) mark in PART - A and 12 (twelve) marks in PART - B.]

PART - A

1. State types of cylinder liners.
2. Why are rings provided in piston?
3. State the function of crank shaft.
4. What is the meaning of SAE?
5. What is bio gas?
6. What is the function of choke valve in carburettor?
7. What is MPFI system?
8. What are the functions of governor?
9. What are the resistances coming to the vehicle?
10. What is the purpose of pressure plate in a clutch?
11. What is the function of slip joint?
12. What are the types of rear axles?
13. What are the types of front axles?
14. What are the functions of steering gear box?
15. Name various types of springs used in suspension system.
16. What are the advantages of disc brake?
17. Enumerate main components of lead acid battery.
18. State the types of spark plug.
19. What is crank case ventilation?
20. What is meant by pollution?

[Turn over.....

PART - B

21. (A) (i) Explain the energy cell with figure.
(ii) Explain the merits and demerits of petrol engine and diesel engine.

(Or)

- (B) (i) What is the necessity for cooling an engine?
(ii) What are the components of Water cooling system? Explain about radiator.

22. (A) (i) Draw the neat sketch of AC mechanical fuel pump and explain.
(ii) Explain the layout of diesel fuel feed system.

(Or)

- (B) Briefly explain the construction and operation of Solex carburettor.

23. (A) (i) What are gear arrangements in the final drive gear box?
(ii) Explain with neat sketch of Hotchkiss drive.

(Or)

- (B) Explain the construction and working of a multi plate clutch with sketch.

24. (A) (i) Briefly explain different types of wheels.
(ii) Write short notes on following: (a) Torsion bar (b) Air suspension.

(Or)

- (B) Explain the working of anti-locking brake system (ABS) with diagram.

25. (A) (i) Explain battery coil ignition system with circuit diagram.
(ii) Write short notes on: (a) Head light (b) Fluorescent lamp.

(Or)

- (B) Explain with a help of neat sketch, the construction and working of lead acid battery.