



C14-M-606

4762

BOARD DIPLOMA EXAMINATION, (C-14)

OCT/NOV—2017

DME—SIXTH SEMESTER EXAMINATION

AUTOMOBILE ENGINEERING

Time : 3 hours ]

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PART—A

3×10=30

**Instructions** : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. What is a frame? List any two functions of frame.
2. List out the types of chassis construction.
3. List out any six requirements of a clutch.
4. State the working principle of friction clutches.
5. List out various types of gear boxes.
6. What are the various resistances encountered by the vehicle? State them briefly.
7. State any three loads acting on the rear axle.

8. List out any six <sup>\*</sup> types of suspension springs.
9. What are the various factors influencing of wheel alignment?
10. List out the requirements of breakes.

**PART—B**

10×5=50

**Instructions** : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain the various components of an automobile.
12. Explain the construction and working of multiplate clutch with neat sketch.
13. Explain the working of synchromesh gear box with a neat line diagram.
14. Explain the working of constant velocity universal joint with neat sketch.
15. Explain the working of air suspension system with a neat sketch and label the parts.
16. Describe the types of front axles with neat sketches.
17. (a) Explain the terms (i) king pin inclination and (ii) cornering force.  
(b) Explain the terms (i) semi-floating axle and (ii) full-floating axle.
18. Explain the working of hydraulic breaking system with neat sketch.

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