



**c09-M-606 B**

**3785**

**BOARD DIPLOMA EXAMINATION, (C-09)  
MARCH/APRIL—2018  
DME—SIXTH SEMESTER EXAMINATION**

**AUTOMOBILE ENGINEERING**

*Time : 3 hours ]*

*[ Total Marks : 80*

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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. List out various components of chassis.
2. State the functions of a frame.
3. Define tractive effort.
4. What is the need for the lubrication of gearbox?
5. What is the function of a clutch?
6. Write the classification of friction clutches.
7. What is the need for a universal joint in automobiles?

**/3785**

1

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8. What are the objectives of vehicle suspension?
9. List out the types of stub axles.
10. State the requirements of a automobile brake.

**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. List out the various components of an automobile and explain them briefly with a line diagram.
12. Describe the working principle of synchromesh gearbox with a neat sketch.
13. What do you understand by friction clutch? Explain the working of a single-plate clutch with a neat sketch.
14. Explain the working of differential with a neat sketch.
15. (a) List out different loads acting on the rear axle.  
(b) Define understeering and oversteering.
16. Explain different types of suspension system with line diagrams.
17. Explain the following terms related to steering geometry :  
(a) Camber  
(b) Kingpin inclination  
(c) Castor  
(d) Toe-in and toe-out
18. Explain the construction and working of a mechanical brake with a neat sketch.

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