



C09-M-606B

**3785**

**BOARD DIPLOMA EXAMINATION, (C-09)**  
**OCT/NOV—2017**  
**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) Answer should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Write any three defects in frames.
2. List out advantages and disadvantages of frameless construction.
3. What is meant by the term 'tractive effort'?
4. Mention any three types of gear selector mechanism.
5. List out any three types of clutches.
6. State the working principle of mechanical clutch.
7. State the various loads that act on the rear axle.

- \* 8. What are the various factors influencing of wheel alignment?
9. List out any three requirements of brakes.
10. Mention any three types of suspension springs.

**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. What are the different components of an automobile? Explain them briefly.
12. Explain the working of synchromesh gearbox with a neat line diagram.
13. Explain the construction details and working of multiplate clutch.
14. Explain clearly the working of differential with a neat line diagram.
15. Explain the Ackermann steering gear mechanism.
16. Explain the working of mechanical brakes with a line diagram.
- \* 17. Explain the working of air suspension system and label the parts.
18. (a) Explain about semifloating axle.  
(b) Draw neat line sketch of front wheel assembly.

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