



C09-M-606B

**3785**

**BOARD DIPLOMA EXAMINATION, (C-09)**  
**MARCH/APRIL—2014**  
**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 *six* simple sentences.

1. List out the various components of an automobile.
2. List out any three common defects in frames.
3. List out different types of clutches.
4. What are the functions of propeller shaft?
5. Why is gearbox required in transmission system?
6. State the principle of friction clutch.
7. List out various types of suspension springs.
8. List out different factors influencing wheel alignment.

- \* 9. What is meant by wheel skidding?
10. What are the advantages and disadvantages of synchromesh gearbox?

**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 different types of chassis. Explain the construction of conventional chassis. 4+6=10
12. Explain the construction and working of single-plate clutch with neat sketch. 3+3+4=10
13. (a) What are the various functions of differential? 4  
 (b) Explain the construction of constant velocity-type universal joint. 6
14. Explain the sliding mesh gearbox with a neat sketch. 5+5=10
15. Draw a neat sketch of steering linkage and explain. 5+5=10
16. Explain the working of hydraulic brakes with neat sketch. 5+5=10
17. Explain the working of air-suspension system with neat sketch. 5+5=10
- \* 18. (a) Explain about full-floating axle. 5  
 (b) Explain the Ackerman steering gear mechanism. 5

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