



C14-M-606

**4762**

**BOARD DIPLOMA EXAMINATION, (C-14)  
MARCH/APRIL—2017  
DME—SIXTH SEMESTER EXAMINATION**

AUTOMOBILE ENGINEERING

Time : 3 hours ]

[ Total Marks : 80

**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 any six components of an automobile.
2. What are various defects in frames?
3. Define clutch. State its functions.
4. State any three advantages of multiplate clutch over single-plate clutch.
5. State the functions of floor-mounted selector mechanism.
6. What is the necessity of gearbox in automobile? List out the different types of gearboxes.
7. List out various parts in a differential.

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8. What are various factors to be considered for suspension system?
9. Define correct steering angle and write its equation.
10. What is meant by wheel skidding?

**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 construction and materials used for frame with a neat sketch.
12. Explain the working of hydraulically operated single-plate clutch with a line diagram.
13. Explain the working of sliding-mesh gearbox with a neat diagram.
14. Explain in detail the construction of propeller shaft with a neat sketch.
15. Explain the construction and working of telescopic shock absorber with a neat sketch.
16. Explain the Ackermann steering gear mechanism with a neat sketch.
17. (a) Explain the terms (i) camber and (ii) caster.  
(b) Explain (i) semi-floating axle and (ii) full-floating axle.
18. Describe the mechanical braking system with a neat sketch.

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