



C09-M-606B

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BOARD DIPLOMA EXAMINATION, (C-09)  
OCT/NOV—2015  
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) Answer should be brief and straight to the point and shall not exceed *five* simple sentences.

1. List out the various types of chassis construction.
2. What are the materials used for construction of frame?
3. State the function of transmission system.
4. List out the various types of gear box.
5. What is the principle of friction clutches?
6. What are the components of clutch?
7. Sketch the propeller shaft and label its various parts.
8. What are the main objectives of suspension system?

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9. Draw the neat sketch of steering geometry.
10. What are the requirements of 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. Explain different types of load sustained by the frames.
12. Write in detail the construction features of clutch components.
13. Explain the principle operation of sliding mesh gear box showing gear in different engaging positions.
14. Draw a neat sketch of differential and explain the function of differential.
15. Explain air suspension system with neat diagram.
16. What is steering? Explain Ackerman steering mechanism with a neat diagram.
17. List out the different types of brake used in vehicles and draw neat sketch of mechanical brakes and write its working.
18. (a) What are the various types of rear axle? Explain any one of them.  
(b) What do you understand by the term self-righting torque?

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