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BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2021

DME - SIXTH SEMESTER EXAMINATION

AUTOMOBILE ENGINEERING

Time : 3 hours ]

[ Total Marks : 80

PART—A

4×5=20

- Instructions :** (1) Answer *any five* questions.  
(2) Each question carries **four** marks.  
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. List out different types of materials used for frame.
2. What are various loads acting on the frame?
3. Mention different types of clutches.
4. State the requirements of effective functioning of a clutch.
5. List various functions of transmission system of an automobile.
6. Write any two functions of gear box.
7. What are the different types of suspension springs?
8. State the functions of propeller shaft.
9. What are the various factors influencing the wheel alignment?
10. Write the classification of brakes.

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**PART—B**

15×4=60

- Instructions :** (1) Answer *any four* questions.  
(2) Each question carries **fifteen** marks.  
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Explain different types of chassis construction of an automobile.
12. Explain the working principle of constant mesh gearbox with a neat diagram.
13. Explain the working principle of multi-plate clutch with a neat diagram.
14. Draw a neat sketch of differential and explain its working.
15. Explain the working principle of air suspension system with a neat diagram.
16. Explain various alignment factors of steering geometry with relevant sketches.
17. Explain the working principle of mechanical brakes with a neat diagram.
18. (a) What are the functions of front axle of an automobile?  
(b) Explain semi-floating axles with a neat sketch.

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