



C20-A-403

**7403**

**BOARD DIPLOMA EXAMINATION, (C-20)  
OCTOBER/NOVEMBER—2023**

**DAE – FOURTH SEMESTER EXAMINATION**

**AUTOMOBILE CHASSIS AND BODY 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 five simple sentences.

1. What is the function of steering system?
2. Define (a) under steering and (b) over steering.
3. What are the advantages of hydraulic brakes over mechanical brakes?
4. State the requirements of braking system.
5. State the purpose of stabilizer bar.
6. What is full forward and semi forward chassis?
7. Define (a) wheel base and (b) wheel track.
8. Define (a) relative humidity and (b) DBT.
9. Define 'co-efficient of performance'.
10. List commonly used refrigerants.

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

**11.** (a) Explain the construction and working of worm and roller steering gear with a neat sketch.

**(OR)**

(b) Explain the construction of integral power steering system with a neat sketch.

**12.** (a) Explain the fixed caliper type disc braking system with the help of a neat sketch.

**(OR)**

(b) Explain the constructional details and working of master cylinder with a neat sketch.

**13.** (a) Explain the constructional details of double wishbone suspension system with a neat diagram.

**(OR)**

(b) Explain the construction and working of telescopic shock absorber with a neat sketch.

**14.** (a) Classify the automobile bodies based on their functional design.

**(OR)**

(b) Explain the construction of truck frame with a neat sketch.

**15.** (a) Explain the construction and working of seat adjustment mechanism with a neat sketch.

**(OR)**

(b) Explain the construction of car door with a neat sketch.

**PART—C**

10×1=10

- Instructions :** (1) Answer the following question.  
(2) The question carries **ten** marks.  
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

**16.** Analyse the Davis steering gear mechanism with a neat sketch.

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