

02

Roll No. :

Total No. of Questions : 9] [Total No. of Pages : 3

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**B.Tech. (ME) 6th Semester (Supplementary)
Examination, July-2021
(F Scheme)**

**AUTOMOBILE ENGINEERING
Paper-ME-302-F**

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note :- Attempt five questions in all, selecting one question from each Section. Q. No. 1 is compulsory.

Compulsory Question

1. (a) What is vehicle frame ? Explain with neat and clean sketch.
- (b) What are the safety features of latest vehicles ? Mention briefly.

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(1)

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(c) Explain the principle of overdrive.

(d) What is EGR ?

5×4=20

Section-A

20 each

2. Explain front and rear drive vehicles with neat sketch.
3. What is Clutch ? Explain multiple and centrifugal clutch.

Section-B

20 each

4. What is epicyclic gear box ? Describe the principle with the help of a neat sketch.
5. Explain the necessity of a differential in an automobile. Discuss in detail the construction and operation of the differential.

Section-C

20 each

6. What are Springs ? Explain the working and characteristics of leaf springs.
7. What is steering system ? Explain power steering system with neat and clean diagram.

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Section-D

20 each

8. Discuss the factors which affect the performance of brake. With the help of neat sketch explain the principle and construction of drum brake.
9. Write short notes on the following :
 - (i) Air injection system
 - (ii) Positive crank case ventilation system

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