

Roll No.

24354

B. Tech. 6th Semester (ME)

Examination – May, 2019

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. Question No. 1 is *compulsory*. All questions carry equal marks.

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|---|---|
| 1. (a) What is four wheel drive vehicle ? | 5 |
| (b) What is transfer case ? | 5 |
| (c) What is Toe-in/Toe-out ? | 5 |
| (d) What is ECR ? | 5 |

SECTION – A

2. (a) What are various components of a Automobile ? 10
(b) Explain the working of overrunning clutch in detail. 10
3. Write short notes on the following : 20
(a) Vehicle body type
(b) Future trends in automobile

SECTION – B

4. (a) What are different types of load coming on rear axle in detail ? 10
(b) Discuss the drive eive and universal joint. 10
5. (a) What is general requirement of a transmission system ? 10
(b) Explain the working of Epi-cyclic gear box in detail. 10

SECTION – C

6. (a) Explain the constructional detail of lead spring in detail. 10
(b) Discuss the rack and pinion power steering gear in detail. 10
7. Explain the following : 20
(a) King pin inclination
(b) Factors influencing the ride comforts

SECTION – D

8. (a) What are various factors affecting the brake performance ? 10
(b) What are different types of tyre wear and their causes ? 10
9. Explain the following : 20
(a) Sources of atmospheric pollution from the automobile.
(b) Purpose and operation of lead acid battery.