

Roll No. ....

**24354**

**B. Tech 6th Semester (ME)  
Examination – May, 2018**

**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 :** Question No. 1 is *compulsory*. Students have to attempt *five* questions in all, at least *one* questions from each Section.

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|--|---|
| 1. (a) Define the clutch linkage.          | 5 |
| (b) What is Universal joint ?              | 5 |
| (c) What is Electronics steering ?         | 5 |
| (d) What is Evaporative emission control ? | 5 |

## SECTION - A

2. (a) What are various safety consideration in leatest vehicle ? 10
- (b) Explain the principle of multi plate clutch in detail. 10
3. Discuss the following : 20
- (a) Multi plate clutch
- (b) Front drive vehicle

## SECTION - B

4. What are different types of gear boxes ? Explain in detail. 20
5. Explain the following : 20
- (i) Propeller shaft
- (ii) Types of load coming on rear axle

## SECTION - C

6. What is the need of suspension system ? Explain the types of suspension system in detail. 20

7. (a) Discuss the Toe in/Toe-out. 10  
(b) What is Rack & pinion power steering gear? 10

### SECTION - D

8. What is the need of braking system? Explain in detail the various types of brakes. 20
9. Write short note on the following: 20
- (i) Purpose and operation of starting system
  - (ii) PVC system
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