

5E6207

Roll No. : _____

Total Printed Pages : **3****5E6207**

B. Tech. (Sem. V) (Main / Back) Examination, November - 2018
Mech. Engineering
5ME6.2 A Automobile Engineering

Time : 3 Hours]**[Maximum Marks : 80**
[Min. Passing Marks : 26

Attempt any five questions, selecting one question from each unit.
All Questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used / calculated must be stated clearly.

Use of following supporting material is permitted during examination.
(Mentioned in form No. 205)

1. NIL 2. NIL

UNIT - I

- 1 (a) Explain the role of chassis with its layout. 8
(b) What is role of clutch ? How multiplate clutch works ? 8

OR

- 1 (a) Explain the constructional feature of chassis. 8
(b) Classify the brakes and explain their functions. What is use of lining materials ? 8

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UNIT - II

- 2 (a) Explain the constant mesh gear box. 8
- (b) What is differential ? Explain its working process. 8

OR

- 2 (a) How power can be transfer with hydraulic torque converter ? Write its advantages over sliding mesh gear box. 8
- (b) Explain the all wheel drive. Write its advantages and disadvantages over front wheel drive. 8

UNIT - III

- 3 What is role of steering geometry ? Explain it. 16

OR

- 3 (a) Explain the working of power steering. 8
- (b) What is suspension system ? How it can be achieved ? Explain different shock absorbers. 8

UNIT - IV

- 4 Explain the starting and battery charging system. What are the general maintenance requirement in this system ? 16

OR

- 4 (a) What is an alternator ? Explain its construction and working process. 8
(b) Explain the automotive lighting system and explain its components. 8

UNIT - V

- 5 (a) What is air conditioning ? How it can be achieved in an automotive system ? Explain its components. 8
(b) What are the safety regulations in India for automotive safety ? Explain them briefly. 8

OR

- 5 Write short notes on :
(a) Air bags
(b) Night vision system
(c) Global positioning system
(d) Refrigerants.

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