

No. of Printed Pages : 03

Roll No.

G-7

B. Tech. EXAMINATION, Dec. 2017

(Seventh Semester)

(B. Scheme) (Main & Re-appear)

MODERN VEHICLE TECHNOLOGY

AE-417-B

(Common for All Branches)

Time : 3 Hours]

[Maximum Marks : 75

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

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

(2-10/7) M-G-7

P.T.O.

Unit I

1. What are the different hybrid vehicles ? Explain the hybrid vehicles with electricity as one of the driving force.
2. Describe various magnetic track vehicles and their working. Explain the principle of operation for a magnetic levitation system.

Unit II

3. (a) What do you mean by closed loop suspension ? Describe briefly.
(b) What are the merits and demerits of air suspension ?
4. Explain the safety features provided in the vehicles for passenger safety.

Unit III

5. (a) Explain the working of a catalytic converter in the vehicles.
(b) What factors are responsible for noise in the vehicles ? Explain the noise due to vibrations in the engine.

6. (a) Describe the various fuels used in the road vehicles.
(b) What is EGR ? How is it effective in controlling the emission ?

Unit IV

7. Describe the working of a vehicle computer in the modern vehicle. What are the various types of sensors and transducers used and their control ?
8. What is NHAI and what are its functions ? What are its current happenings ? Write a note on automated roads and vehicles.