

Roll No.

103-A
14

24704

B. Tech. 3rd Sem. (Fire Tech. & Safety)

Examination – December, 2015

HEAVY VEHICLE AUTOMOBILE ENGG. & SAFETY

Paper : FT-207-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 total. Question No. 1 is *compulsory* and must be attempt *one* question from each Section. All questions carry equal marks.

1. (a) Define the Gear Box of an Automobile.
 - (b) What do you mean by Power Steering ?
 - (c) Define EURO Norms.
 - (d) Why lubricating system is necessary for an Automobile ?
- 4 × 5 = 20

SECTION – A

2. What do you mean by an IC Engine ? Explain their classification, construction detail and different components in detail.
- 20

3. Define the function of the clutch in an automobile. Explain the clutch with their types, construction, operation and fault finding of the clutch. 20

SECTION – B

4. Explain the following Steering Geometry : 6, 6, 8
(a) Caster
(b) Camber
(c) King Pin Inclination
5. What do you mean by suspension system in an automobile ? Explain the suspension system with types, construction, operation necessity of Shock Absorber and Coil Spring. 20

SECTION – C

6. Explain the following Ignition system : 7, 7, 6
(a) Magnet Ignition
(b) Battery Ignition
(c) Electronic Ignition
7. What are the source of the air pollution and which types of technique can be used to control the pollution ? 20

SECTION – D

8. Explain the different lubricating system of an automobile. 20
9. Explain the construction and operation of the Fire Fighting Vehicle and Fire Boat. 20