

FT - 304**B.E. III Semester**

Examination, December 2012

Heavy Vehicle Automobile Engineering And Safety*Time : Three Hours**Maximum Marks : 70/100**Note: Attempt all questions.***UNIT I**

1. (a) Define compression ratio. How does it affect the house power of an engine.
- (b) Give classification of Internal combustion engine.

OR

2. (a) What are main parts of a friction clutch? Describe the function of each part.
- (b) Describe the construction and working of a single plate clutch with the help of neat sketch.

UNIT II

3. Describe the construction and working of a differential.

OR

- 4 (a) Give a classification of brakes.
- (b) What is the function of master cylinder in hydraulic Brakes.

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UNIT III

5. (a) What is the difference between battery ignition system and coil ignition system.
- (b) What are the requirement of a good spark plug.

OR

- ~~6. (a)~~ What are the major source of air pollution.
- (b) Explain the working of lead acid battery.

UNIT IV

7. Name the various properties of lubricants and briefly describe the following :

- (a) Viscosity (b) Flash Point
- (c) Fire Point (d) Film Strength.

OR

8. Explain the construction and working of water fire tender.

UNIT V

9. What is the necessity of engine cooling? Explain over cooling.

OR

- ~~10.~~ Explain the following terms.

- (a) Camber (b) Caster
- (c) King pin inclination (d) Toe-in and Toe- out.

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