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**FT - 304**

**B.E. III Semester**

Examination, June, 2013

**Heavy Vehicle Automobile Engg. and Safety**

Maximum Marks : 70

Minimum Pass Marks : 22

Note: Attempt all questions.

**Unit - I**

1. a) On what basis the automobile engines can be classified. 7
- b) List the essential part of a motor vehicle engine. 7

**OR**

2. a) Explain the function and working of piston. Why is piston smaller in diameter than cylinder in which operates. 7
- b) Why is cylinder head cast separately from the cylinder block? Explain. 7

**Unit - II**

3. Briefly describe the construction and working of hydraulic brakes. 14

**OR**

4. a) What are functions of suspension in a motor vehicle. 7
- b) What are the requirements of suspension system. 7

**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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