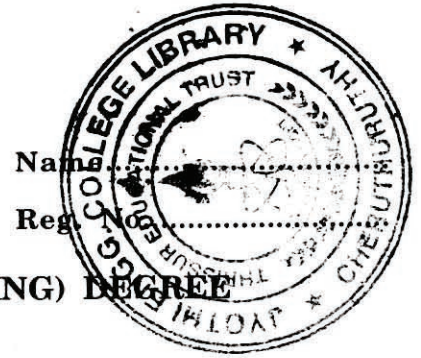


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Name

Reg.

**SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, JUNE 2013**

ME/PTME 09 L07—AUTOMOBILE ENGINEERING

(2009 Scheme – Supplementary)

Time : Three Hours

Maximum : 70 Marks

Part A

Answer all questions.

1. Sketch an engine cylinder with its various components.
2. Sketch a simple carburetor.
3. What is the need for ABS ?
4. Explain any two steering geometry.
5. Write a short note on leaf spring.

(5 × 2 = 10 marks)

Part B

Answer any four questions.

6. Explain the valve actuating mechanism.
7. Explain an MPFi system.
8. Write short notes on overdrives.
9. Explain a rack and pinion steering system.
10. Explain the lubrication system with a neat sketch.
11. Sketch and explain a fluid coupling.

(4 × 5 = 20 marks)

Part C

Answer all questions.

12. (a) (i) Explain the classification of automobile. (6 marks)
 - (ii) Sketch and explain the functions of piston rings. (4 marks)
- Or*
- (b) (i) Explain the types of drives of an automobile. (4 marks)
 - (ii) Explain the combustion chambers of an engine. (6 marks)

Turn over

13. (a) Sketch and explain the construction and working of a battery ignition system.

Or

(b) With neat sketches differentiate an MPFi and CRDi system.

14. (a) Sketch and explain the construction and working of an air brake system.

Or

(b) Explain (i) Sliding mesh gearbox ; (ii) Universal joint.

15. (a) (i) Compare a conventional tube tyre and a tubeless tyre with diagrams. (6 marks)

(ii) Explain the necessity of an alloy wheel. (4 marks)

Or

(b) (i) Explain Macpherson strut shock absorber. (5 marks)

(ii) Coil spring and leaf spring suspensions. (5 marks)

[4 × 10 = 40 marks]