

C 27114

Name.....

Reg. No.....

**EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION**  
**MAY 2012**

**ME 04 805 (E)—AUTOMOBILE ENGINEERING**

Time : Three Hours

Maximum : 100 Marks



*Answer all questions.*

- I. (a) Why is flywheel necessary in multi cylinder engines ?  
(b) What is piston clearance ? Why is it necessary ?  
(c) Name the engine parts of a car which require lubrication.  
(d) What is meant by compensation in carburettor ?  
(e) List the various types of clutches.  
(f) Why wheel cylinder necessary in hydraulic brakes ?  
(g) What are the causes of tyre wear ?  
(h) What are the possible causes of engine overheating ?

(8 × 5 = 40 marks)

- II. (a) Describe battery ignition system with a neat diagram.

*Or*

- (b) (i) Explain valve timing diagram of 4 stroke petrol engine.  
(ii) What is valve-tappet clearance ? Why is it necessary ?

- III. (a) Explain the different types of lubrication systems used in automobiles with neat sketches.

*Or*

- (b) Draw a neat diagram of fuel injector and name the parts. Describe its working.

- IV. (a) Describe the two mechanism of steering gear.

*Or*

- (b) Describe the constant Mesh gear box. How does it differ from the Sliding mesh gear box.

- V. (a) Describe an independent front end suspension using torsion bars.

*Or*

- (b) Explain the following :

- (i) Positive cranks case ventilation.  
(ii) Exhaust gas recirculation.

(4 × 15 = 60 marks)