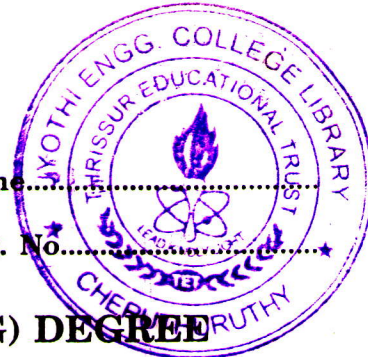


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Name.....

Reg. No.....



**EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, JUNE 2008**

ME 04 805 (E) - AUTOMOBILE ENGINEERING

(2004 Admissions)

Time : Three Hours

Maximum : 100 Marks

Answer all questions

- I. (a) Give the different classification of automobiles.
(b) Explain the Different types of cylinder arrangement used in automobiles with neat sketch.
(c) Explain battery ignition system with simple sketch.
(d) What is oil Additives? Explain briefly the commonly used oil Additives.
(e) What are the requirements of transmission system?
(f) What is function of gear synchronizer?
(g) List out the advantages of coil spring over leaf spring.
(h) What is engine 'tuning'? Explain briefly the tuning procedure.

(8 × 5 = 40 marks)

- II. (a) (i) Sketch and explain the different types of piston heads used in diesel engines and list their advantages.

(10 marks)

- (ii) Sketch a sectioned piston of a petrol engine and Label its various parts.

(5 marks)

Or

- (b) Describe in detail the function, construction and materials used for the

(i) Cylinder block (ii) Cylinder head

(iii) Crank shaft (iv) Connecting rod

(15 marks)

- III. (a) (i) What is carburetion? What are the different types of carburetors used in automobile?

(8 marks)

- (ii) Explain the construction and working of MPFI system with neat sketch.

(7 marks)

Or

Turn over

- (b) What are the objects of lubricating an engine? Explain different methods of engine lubrication with neat sketch.

(15 marks)

- IV. (a) Explain the construction and working of a power assisted steering with neat sketch and list out its advantages.

(15 marks)

Or

- (b) (i) Explain the construction and working of a differential with a neat sketch.

(7 marks)

- (ii) Define and explain the following :

(a) Camper angle.

(b) Caster angle.

(c) King-pin inclination.

(d) Toe-in and Toe-out.

(8 marks)

- V. (a) (i) What are the requirements of a good tyre?

(5 marks)

- (ii) What are the different types of tyre construction used in automobile? Explain it with neat sketch

(10 marks)

Or

- (b) Explain briefly the troubles and repairs of engine parts relating to the following:

(i) Connecting rod assembly

(ii) Crankshaft assembly

(iii) Cylinder head and cylinder block.

(15 marks)

[4 × 15 = 60 marks]