



B.E./B.Tech. (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV/DEC 2011

MECHANICAL ENGINEERING

SEVENTH SEMESTER – (REGULATIONS 2004)

ME505 ENGINEERING ECONOMICS & COST ESTIMATION

Time : 3 hr

Max Mark : 100

Answer ALL Questions

PART-A (10 X 2 = 20 Mark)

1. Compare Macro Economics Vs Micro Economics
2. What are the assumptions of BEA?
3. What are the aims of Value Engineering?
4. What are the benefits of Time value of money?
5. When do we use Future worth method?
6. What are the implications of rate of return method?
7. What is Maintenance analysis?
8. How will you determine economic life of an asset?
9. What is straight line method of depreciation?
10. What are the objectives of evaluation of public alternatives?

PART-B (5 X 16 = 80 Mark)

11. Ram Chandra sells a line of men's footwear for Rs 18 a pair. Each pair that is sold contributes Rs 6 to the recovery of fixed costs and to profits. His fixed costs of operation amount to Rs 84,000 a year. You are required to

- (a) Show how many pairs must be sold in a year to break-even;
- (b) To compute the sales revenue at the BEP
- (c) To compute the sales revenue required to earn a net income of Rs 54,000.

12 (a) Describe the various phases of value engineering? (16)

OR

12 (b) Discuss the steps adopted to compute the following: Write short notes for the following:

- (i) Single payment present worth factor
- (ii) Uniform gradient series annual equivalent factor
- (iii) Equal payment series sinking fund factor
- (iv) Effective interest rate

(4+4+4+4)

13 (a) Explain the computations of Future worth method (revenue and cost dominated cash flow diagram) with suitable example? (16)

OR

13 (b) Discuss the steps involved in the annual equivalent method for Cost dominated cash flow diagram with suitable example? (16)

14 (a) Elaborate the various types of maintenance? (16)

OR

14 (b) Describe the simple probabilistic model for items which fail completely for automobile assembly industry? (16)

15 (a) Describe the various methods of depreciation? (16)

OR

15 (b) Write short notes for the following:

(a) Evaluation of Public Alternatives (4)

(b) Inflated Adjusted Decisions (4)

(c) Material Selection for Product Design (4)

(d) Process Planning (4)