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HSSM 4201 / PH. 3.10(O)

Third Semester Examination – 2008

ENGINEERING ECONOMICS AND COSTING

Full Marks – 70

Time : 3 Hours

*Answer Question No. 1 which is compulsory  
and any five from the rest.*

*The figures in the right-hand margin  
indicate marks.*

1. Answer the following questions : 2×10
  - (a) Why is it essential to find out the time value of money ?
  - (b) If a certain sum of money is doubled in 8 years at a given simple interest, in how many years will it be four times ?
  - (c) How does change in interest rate affect an equivalence between two cash flows ?

P.T.O.

- (d) How is present worth helpful in evaluating the project?
- (e) State two differences between tangible benefits and intangible benefits.
- (f) Define IRR.
- (g) Why is depreciation charged on fixed assets?
- (h) What is 'contribution'?
- (i) How will you find out abnormal gain?
- (j) What do you mean by relevant cost?
- 2 (a) What will be the future equivalent amount at the end of five years of a uniform, continuous cash flow, at the rate of Rs. 500 per year for five years, with interest compounded continuously at the nominal annual rate of 8%? 5
- (b) The lease payments of a machine amount to Rs. 10,000 per month for five years. If payments are made on the first of each

month, what is the present worth of the agreement at a nominal annual interest rate of 12%, compounded monthly? 5

3. "The most common way to approach public project evaluation is by cost-benefit analysis". Explain the statement with two examples. Discuss the qualification of project costs and benefits. 6+4
4. Why is it required to find out equivalent annual worth? How can you compare the assets with unequal lives? Discuss with examples. 4+6
5. ABC Ltd. has provided the following information:

	Sales Rs.	Profit Rs.
2007	10,00,000	2,00,000
2008	15,00,000	4,00,000

You are required to calculate: 3+3+4

- (i) P/V ratio
- (ii) Fixed cost
- (iii) Break-even sales.

6. (a) Explain sensitivity analysis with one example.

5

(b) How does depreciation affect the Income Statement and Balance Sheet ? Explain with two examples.

5

7. From the following data, compute material variances :

10

Name of the material	Standard		Actual	
	Quantity	Price	Quantity	Price
Alpha _____	4,000	10	4,200	12
Beta _____	2,000	21	2,150	20
Gamma _____	1,500	33	1,250	36

8. Write short notes on :

5+5

(a) Process Costing and Process Losses

(b) Cost control.