

Name : .....

Roll No. : .....

Invigilator's Signature : .....

**CS/B.TECH(ME/PE/AUE)/SEM-7/HU-702/2011-12  
2011**

**ENGINEERING ECONOMY & FINANCIAL  
MANAGEMENT**

Time Allotted : 3 Hours

Full Marks : 70

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

**GROUP – A**

**( Multiple Choice Type Questions )**

1. Choose the correct alternatives for any *ten* of the following :

10 × 1 = 10

i) The basic question in Economics is/are

- a) what and how to produce
- b) for whom to produce
- c) all of these
- d) none of these.



- ii) Luxury goods are those for which price elasticity ( $E_p$ ) is
- a) positive                                      b) negative
- c) one    d) zero.
- iii) A budget consists of a series of budgets for a different levels of activity is known as
- a) Fixed budget                                      b) Flexible budge
- c) Master budget                                      d) Sales budget.
- iv) Fixed cost does *not* change
- a) with infinite period of time
- b) with production volume
- c) production shutdown
- d) after severe accident.
- v) If  $X$  is a normal good, then the Income-Consumption curve is
- a) upward sloping
- b) downward sloping
- c) parallel to income axis
- d) none of these.



vi) Under Monopoly

- a) slope of average revenue ( AR ) > slope of marginal revenue ( MR )
- b) slope of average revenue ( AR ) < slope of marginal revenue ( MR )
- c) AR curve and MR curve are identical
- d) Either (a) or (b).

vii) When the Average Cost ( AC ) is falling

- a)  $AC > MC$  ( Marginal Cost )
- b)  $AC < MC$
- c)  $AC = MC$
- d) Either (a) or (b).

viii) The shape of the Average Fixed Cost is

- a) parallel to the horizontal axis
- b) parallel to the vertical axis
- c) downward sloping
- d) rectangular hyperbola.



- ix) Demand for a good is said to be elastic when
- a) Elasticity (  $E_p$  )  $> 1$
  - b)  $E_p < 1$
  - c)  $E_p = 1$
  - d) none of these.
- x) Price discrimination is possible when there
- a) is no arbitration
  - b) is separation of market
  - c) elasticity is different in the sub-market
  - d) all of these.
- xi) At Break-even point sales revenue exactly equals
- a) Total Costs
  - b) Fixed Cost
  - c) Variable Cost
  - d) Total Revenue.
- xii) Isoquant has the slope of
- a) positive
  - b) negative
  - c) zero
  - d) none of these.



**GROUP – B**

**( Short Answer Type Questions )**

Answer any *three* of the following.  $3 \times 5 = 15$

2. State briefly the concept of a firm.
3. Differentiate between the following :  
Financial and Operating Languages.
4. State the theory of consumer behaviour in short.
5. What is an indifference curve ? Explain. Write down the properties of an indifference curve.
6. Write down different types of production functions. What are the different types of isoquant ?

**GROUP – C**

**( Long Answer Type Questions )**

Answer any *three* of the following.  $3 \times 15 = 45$

7. a) The following information is available for Sortex International :

Selling price per unit = Rs. 20

Variable cost per unit = Rs. 12

Total fixed costs = Rs. 5,60,000

- i) What is the break-even output ?
- ii) What is the profit earned when the output is 1,00,000 units ?
- iii) What should be the output to achieve a target profit of Rs. 4,00,000 ?
- iv) What is the break-even sale in rupees ?



- b) Mathematically prove that the condition of equilibrium of a consumer is

$$\frac{MU_x}{MU_y} = \frac{P_x}{P_y} = MRS_{x,y}$$

where,

$MU_x$  = marginal utility for commodity  $x$

$MU_y$  = marginal utility for commodity  $y$

$P_x$  = marked price of commodity  $x$

$P_y$  = marked price of commodity  $y$

$MRS_{x,y}$  = marginal rate of substitution of commodities  $x$  for  $y$ .

- c) What are the different types of elasticity of demand ?  
Describe in detail. 5 + 5 + 5

8. a) Define Cost function.

- b) What do you mean by Isoquant ? What are its properties ?

- c) "Two Isoquant cannot intersect." Justify the statement.

3 + ( 2 + 4 ) + 6

9. a) Explain the concept of CVP analysis with any suitable example.

- b) A business produces 200 units of a product by making the following expenditure :

i) Materials Rs. 30,000

ii) Labour Rs. 20,000

iii) Factory Overheads Rs. 4,000

iv) Administrative overheads Rs. 5,754

v) Selling and distribution overheads Rs. 1,500.

The products are sold at a price of Rs. 400 per unit.

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The above expenditure are classified into fixed and variable as follows :



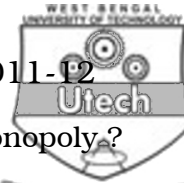
<b>Expenditure</b>	<b>Fixed</b>	<b>Variable</b>
a) Materials	Nil	100%
b) Labour	50%	50%
c) Factory Overhead	25%	75%
d) Administrative Overhead	100%	Nil
e) Selling and distribution Overhead	60%	40%

From the above information determine (i) Total variable Costs and fixed Costs (ii) Contribution (iii) P/V ratio (iv) Break - even points in units and sales value. 5 + 10

10. Lindwal Ltd. produces a standard product which moves through Process I and Process II. Finished product from process I is used as raw materials for Process II. From the following details prepare necessary accounts :

		<i>Process I</i>	<i>Process II</i>
Input	( in Units )	15000	13000
Material	( in Rs. )	30000	4000
Labour	( in Rs. )	18000	15275
Overheads	( in Rs. )	9000	10950
Normal Loss	( estimated )	10%	5%
Scrap value per unit ( in Rs. )		2	3

There was no opening or closing Work-in-Progress. The final output from Process II was 12500 Units.



11. a) What do you mean by Discriminating Monopoly?
- b) Is discrimination always possible and profitable? What are the conditions of price discrimination?
- c) State and explain with the help of diagram that a Discrimination Monopolist charges a high price in the market where price elasticity is lower and low price where elasticity is higher. 2 + 3 + 10
12. What is meant by Cost Accounting? "Cost Accounting has become an essential tool of management in automobile manufacturing companies operating in India." Give your comment on the statement. 3 + 12
13. Write short notes on any *three* of the following :
- a) Unsystematic and Systematic Risks
  - b) Return on Equity and Return on Net worth
  - c) Operating cycle
  - d) Net Present Value
  - e) Mix-variance.
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