

CS/B.Tech (ME,PE)/SEPARATE SUPPLE/SEM-7/HU-702/2011

## 2011

## **ENGG. ECONOMICS & 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 :  $10 \times 1 = 10$ 
  - In a highly populated country production is increasing in
    - a) G. P. Ratio
    - b) A. P. Ratio
    - c) Double rate of population increase
    - d) None of these.
  - ii) Use of three dimension land is required at
    - a) Village area b) City
    - c) Hilly area d) All of these.

SS-174

CS/B.Tech (ME,PE)/SEPARATE SUPPLE/SEM-7/HU-702

- iii) When a demand of product is non-elastic it is a
  - a) Essential goods
  - b) Luxurious goods
  - c) Goods with many substitutes
  - d) None of these.
- iv) Match each item in the left hand Column *A* with an appropriate item in the right hand Column *B*.

	Column A		Column B		
	Broaching			Metal joining	
	Soldering			Metal cutting	
	Minimum level of production		Flow control system		
	Kanban		Break-even analysis		
V)	Demand and supply is smoothly regulated in			regulated in	
	a)	Competitive market	b)	Monopoly market	
	c)	Duo-poly market	d)	Oligopoly market.	
vi)	Break-even point is connected with			ith	
	a)	Standard costing	b)	Job costing	
	c)	Critical path analysis	d)	Marginal costing.	
vii)	Text	fextile industries are			
	a)	Contract costing	b)	Process costing	
	c)	Uniform costing	d)	Marginal costing.	
viii)	Demand estimation depends on				
	a)	Profit maximization			
	b)	Market experiments			
		_			

- c) Long-run survival
- d) Management utility maximization.

SS-174

tic it is a

CS/B.Tech (ME,PE)/SEPARATE SUPPLE/SEM-7/HU-7

ix) Net present value decides by

a) 
$$F = P(1+i)^n$$

b)  $P = \frac{F}{\left(1+i\right)^n}$ 

c) 
$$P = P = \sum_{t=1}^{n} \frac{ct}{(1+k)t} - co$$

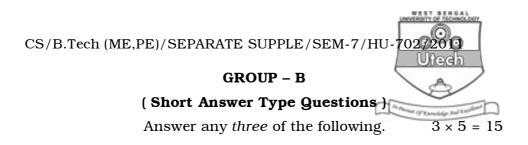
d) 
$$P = \sum_{t=1}^{n} \frac{ct}{(1+r)t} - co = 0.$$

- x) Halsey plan decides by
  - a) Time taken × Time wage rate
  - b) Time taken × Time wage rate ×  $\frac{\text{Time taken}}{\text{Time allowed}}$  × Time saved × Time wage rate
  - c) Time taken × Time wage rate + 50% of time saved × time wage rate
  - d) None of these.
- xi) Patents is
  - a) Asset
  - b) Liability
  - c) Source of Income
  - d) None of these.
- xii) When gross profit is 25% of cost of goods sold, sale is
  - a) 4 times of gross profit
  - b) 5 times of gross profit
  - c) Ten times of gross profit
  - d) 3 times of gross profit.

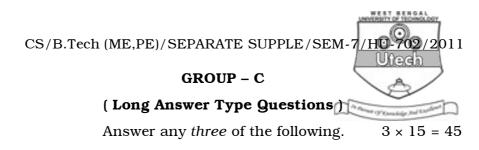
SS-174

3





- 2. "The modern meaning of economics renders help in various matters of decision making". Discuss.
- 3. Define the meaning of production. Describe briefly the function of production.
- 4. State and explain the law of marginal utility. Mention its limitation and importance.
- 5. Distinguish between any *two* of the following :
  - a) Individual's demand and market demand
  - b) Firm and industry demand
  - c) Autonomous and derived demand
  - d) Perishable and durable goods.
- 6. Why does the government intervene through various means in product pricing ? Discuss.
- SS-174 4



- a) Define the maximizing of firm. Explain briefly the main objectives of firm.
  - b) A carpenter makes 100 chairs per month and sells them at Rs. 150 per piece. His expenses on rent of the shop, cost of wood and other materials are worth Rs. 5,000. He employs two workers those monthly wage bills stand at Rs. 2,400 and pays electricity bill of about Rs. 500 per month. He has invested Rs. 50,000 in the form of machines tools and inventories in the business, of which Rs. 25,000 is from his own fund and the remaining Rs. 25,000 is a loan from Bank at the interest rate of 18% per annum, Further, assuming imputed cost of his own time, his wife's time and his own savings of Rs. 25,000 for the month are Rs. 3,000, Rs. 1,000 and Rs. 250 respectively, calculate :
    - i) Total receipts
    - ii) Total explicit costs
    - iii) Total implicit costs
    - iv) Business ( Accounting ) profit
    - v) Economic profit. 7+8

SS-174

CS/B.Tech (ME,PE)/SEPARATE SUPPLE/SEM-7/HU-7027201

	C	a511 110 w		
Project	Yr 0	Yr 1	Yr 2	Yr 3
Α	- 10000	+ 10000	—	
В	- 10000	+ 7500	+ 7500	—
С	- 10000	+ 2000	+ 4000	+ 12000
D	- 10000	+ 10000	+ 3000	+ 3000

8. A company is considering the following investment projects :

Cash flow

Rank the projects according to the following methods.

(1) Payback (2) NPV — assuming discount rates of 10 and 30 percent.

P.V. at Re. 1	@ 10%	@ 30%
At the end of 1 yr	·909	·769
At the end of 2nd yr	·826	·592
At the end of 3rd yr	·751	·455
	•	5 + 10

9. *X* co. has made plans for the next year. It is estimated that the company will employ total assets of Rs. 8,00,000, 50% of the assets being financed by borrowed capital at an interest cost of 8% per year. The direct costs for the year are estimated of Rs. 4,80,000 and all other operating expenses are estimated at Rs. 80,000. The goods will be sold to customers at 150% of direct costs. Tax rate is assumed to be 50%.

You are required to calculate :

- i) Net profit margin
- ii) Return on Assets
- iii) Assets turnover and
- iv) Return on owner's equity. 6+3+3+3

SS-174

10. *AB* & Co. has created three production cost centres – *P*, *Q* and *R* and two service cost centres *X* and *Y* for accumulating costs. The payroll records and material requisitions indicate respectively the following expenses for indirect labour and indirect supplies :

Cost centres	Indirect labour	Indirect supplies
Production	Rs.	Rs.
Р	17190	5157
Q	17763	5438
R	15471	2865
Service		
X	_	2292
Y	5157	9168

The company records also reveal that the following overhead costs are incurred during the period under consideration :

Factory rent Rs. 42402

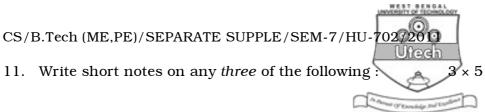
Depreciation Rs. 22347

The following information is also available.

Cost centres	Floor space ( sq. mt. )	Value of equipment ( Rs.)	Direct labour hours ( hrs. )
Production			
Р	10000	22,50.000	19250
Q	7600	13,50.000	18000
R	4800	6,00.000	7000
Service			
X	3200	7,50.000	
Y	4000	9,00.000	

Calculate overhead absorption rate.

SS-174



- a) Zero base budgeting
- b) Margin of safety
- c) Material price variance
- d) Golden rules
- e) Capital gearing
- f) CVP analysis.