Name : ....

Roll No. : ....

Invigilator's Signature : ....

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 : $10 \times 1 = 10$

   i) 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.

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

a) Competitive market
b) Monopoly market

c) Duo-poly market
d) Oligopoly market.

vi) Break-even point is connected with

a) Standard costing
b) Job costing

c) Critical path analysis
d) Marginal costing.

vii) Textile 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.

ix) Net present value decides by

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

b) $P = \dfrac{F}{(1+i)^n}$

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

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

x) Halsey plan decides by

a) Time taken × Time wage rate

b) Time taken × Time wage rate × $\dfrac{\text{Time taken}}{\text{Time allowed}}$ × 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.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. 3 × 5 = 15

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.

GROUP – C

(Long Answer Type Questions)

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

7. 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

8. A company is considering the following investment projects :

Cash flow

Project	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**
A	– 10000	+ 10000	—	—
B	– 10000	+ 7500	+ 7500	—
C	– 10000	+ 2000	+ 4000	+ 12000
D	– 10000	+ 10000	+ 3000	+ 3000

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

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.
P	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			
P	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.

11. Write short notes on any *three* of the following : 3×5

a) Zero - base budgeting

b) Margin of safety

c) Material price variance

d) Golden rules

e) Capital gearing

f) CVP analysis.