



Name :

Roll No. :

Invigilator's Signature :

CS/B.TECH/CHE/SEM-7/HU-715/2012-13

2012

INDUSTRIAL 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.*

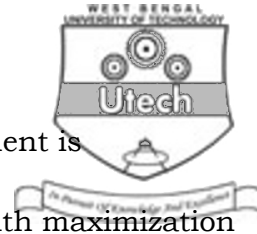
GROUP – A

(Multiple Choice Type Questions)

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

10 × 1 = 10

- i) Who among the following is known as 'Father of Scientific Management' ?
 - a) F.W. Taylor
 - b) Henri Fayol
 - c) Gilbreth
 - d) Max Weber.
- ii) Which of the following is a method of manpower demand forecasting ?
 - a) Work study
 - b) Inventory analysis
 - c) Wastage analysis
 - d) Managerial Judgement.



- iii) Basic objectives of financial management is
- a) profit maximization b) wealth maximization
 - c) both (a) and (b) d) none of these.
- iv) A game without a Saddle Point can be solved by using
- a) pure strategies b) mixed strategies
 - c) both (a) and (b) d) none of these.
- v) Ratio analysis is a widely used technique for measuring
- a) liquidity of a firm b) solvency of a firm
 - c) profitability of a firm d) all of these.
- vi) If a transportation problem has m origins and n destinations then the total number of Basic Feasible Solutions are at least
- a) $m + n + 1$ b) $m - n + 1$
 - c) $m + n - 1$ d) $n - m + 1$.
- vii) The person zero sum game means that the value of the game is
- a) 1 b) ∞
 - c) 0 d) $\frac{1}{2}$.



viii) The role in which a manager initiates a new project is called

- a) Entrepreneur role b) Negotiator role
- c) Disseminator role d) Monitor role.

ix) Which one of the following is not a key element of organizational structure ?

- a) Centralization b) Coordination
- c) Departmentalization d) Formalization.

x) Measure of efficiency of a productive system is also known as

- a) utility b) efficacy
- c) effectiveness d) productivity.

xi) Inventory has been defined as

- a) materials lying in storage
- b) materials to be used
- c) materials to be purchased
- d) all of these.



- xii) An effective quality control operation starts from
- a) the inspection of input materials at the beginning of the production process and continuous as per the inspection schedule
 - b) inspection at the end of the production process
 - c) as and when the inspection is called for defective materials arising out of production
 - d) all of these.

GROUP – B

(Short Answer Type Questions)

Write short notes on any *three* of the following. $3 \times 5 = 15$

- 2. Method study *vs* Work measurement
- 3. Statistical Quality Control
- 4. MRP
- 5. Du Pont Chart
- 6. Distinction between funds flow statement and cash flow statement.



GROUP – C

(Long Answer Type Questions)

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

7. What do you mean by Economic Order Quantity ? Establish the EOQ Model when unit price of a given item is fixed.

A chemical firm buys 2500 units annually of a particular item from a vendor at a cost of Rs. 3 per unit. It has now received a revised price schedule from the vendor which is as follows :

Order Quantity	Price per unit
Less than 500 units	Rs. 3.00
500 to 1250 units	Rs. 2.90
1250 units or more	Rs. 2.85

The cost of placing an order and executing the delivery once is Rs. 25 and the inventory carrying cost as a percentage of average inventory investment is 20%. Determine the economic ordered quantity of the item. $7 + 8$

8. Discuss different Schools of Management Thought according to F.W. Taylor and Henry Fayol. Explain the principal functions of Management. $8 + 7$

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9. What do you mean by the term 'Acceptance Sampling' and what are the four parameters of an OC curve.

10 samples, each of size 50, were inspected in pressure testing. The results of the inspection are given below :

Sample No. :	1	2	3	4	5	6	7	8	9	10
No. of Defectives :	2	3	2	0	2	3	2	1	2	3

Draw the control chart for fraction defectives and state whether the process is under control. 7 + 8

10. What are the objectives of Budgetary Control ?

Following are the expenditure in respect of selling and distribution expenses of D.K. Ltd. For the budget period ended on 31st December, 2009 :

Particulars	District			Total (Rs.)
	Nadia (Rs.)	Burdwan (Rs.)	Murshidabad (Rs.)	
Salesmen salaries	10,000	15,000	12,000	37,000
Commission on Sales	15,000	20,000	8,000	43,000
Selling Expenses	8,000	6,000	3,000	17,000
Rent & Taxes	6,000	5,000	4,000	15,000
Advertising	2,000	1,000	500	3,500
Warehouse expenses	3,000	4,000	1,000	8,000
	44,000	51,000	28,500	1,23,500



During the coming budget period, 2009, following changes are expected to be made :

- i) Salesman salaries will be increased by Rs. 3,000, Rs. 1,000, Rs. 2,000 for Nadia, Burdwan and Murshidabad respectively.
- ii) Commission on sales will be increased by 4% in all districts.
- iii) Selling expenses will be increased by 2% in Nadia and Murshidabad each.
- iv) Rent and Taxes will be increased in each district by 6%.
- v) Advertising expenses are to be increased by 4% for Burdwan and 3% each for Nadia and Murshidabad.
- vi) Warehouse expenses are to be increased by Rs. 500, Rs. 400 and Rs. 600 for Nadia, Burdwan and Murshidabad respectively.

You are required to prepare a selling and distribution expenses budget for the ensuing budget period 2009.

5 + 10

11. Discuss different factors that facilitates a Plant location.
Explain different types of Production. 6 + 9

12. Solve the following L.P.P. using Simplex method :

$$\text{Maximize } z = 2x_1 + 3x_2$$

$$\text{subject to } x_1 + x_2 \leq 8$$

$$x_1 + 2x_2 = 5$$

$$2x_1 + x_2 \leq 8$$

$$x_1, x_2 \geq 0$$

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Use Dominance method to solve the game whose payoff matrix is given below :

		B			
		B_1	B_2	B_3	B_4
A	A_1	2	1	4	0
	A_2	3	4	2	4
	A_3	4	2	4	0
	A_4	0	4	0	8

8 + 7

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