

B.A.(H) Business Economics (2023-24)
Semester V.

Internal Assessment Assignment.
Quantitative Techniques for Management.

Date of Submission : 3/10/23 Max Marks : 30

Attempt all of the following questions :-

Q1 Find the monthly production & distribution schedule which will maximize the profits using Transportation Method with the following details :-

Factory ↓	Sales Agencies (Shipping Cost / per unit)				Monthly Capacity (units)	Cost of Production (per unit) (Rs.)
	1	2	3	4		
A	7	5	6	4	10	10
B	3	5	4	2	15	15
C	4	6	4	5	20	16
D	8	7	6	5	15	15
Monthly Requirement (units)	8	12	18	22		
Sales Price (Per unit) (Rs.)	20	22	25	18		

★ The cost inside the table is shipping cost per unit from one factory to various Sales Agencies.

★ You are required to maximize total profit of transportation.

(10 marks)

Ushita

Quantitative Techniques for Management

Q2.

Workers	Jobs				
	J ₁	J ₂	J ₃	J ₄	
W ₁	5	3	7	9	* The Table Shows the cost per worker per job per unit.
W ₂	7	8	6	11	
W ₃	5	9	7	12	
W ₄	8	13	15	14	

Using the Hungarian Assignment Method, Determine which Job should be allocated to which Worker to minimize the total cost per unit (10 marks)

Q3 Solve using simplex Method of Linear Programming Problems.

Minimize $Z: 40x_1 + 24x_2$
Subject to:-

$$20x_1 + 50x_2 \geq 4800$$

$$80x_1 + 50x_2 \geq 7200$$

$$x_1, x_2 \geq 0.$$

Bahitya