

Dr. Babasaheb Ambedkar Open University
Term End Exam August – 2010

Course Code : DOR-02 Roll No. _____
Subject : Assignment and Transportation Problems
Date : 02-08-2010 Marks : 70
Time : 03:00 to 06:00

Note : All questions carry equal marks.

Que 1: Explain Assignment problem. (14)

OR

Explain traveling salesman problem.

Que 2: Obtain a basic feasible solution of the following transportation problem by North West corner rule for Amin Ltd. (14)

Origins		D1	D2	D3	D4	D5	Supply
	O1	3	4	1	8	9	20
	O2	2	0	1	5	8	30
	O3	7	11	20	40	3	15
	O4	2	1	9	14	16	13
Demand		40	12	8	18	6	78

Que 2: Narrate the steps in solution method of Assignment problem.

Que 3: Solve the following Assignment problem to maximize the total profit for ABC Ltd. (14)

(Profit in Rs.)

	D1	D2	D3	D4
O1	3	4	11	9
O2	5	7	8	9
O3	5	6	6	7
O4	4	6	8	8

OR

(P.T.O)

Que 3: Solve the problem to minimize the total distance traveled.

	P	Q	R	S	T	U
A	41	62	39	52	25	51
B	22	29	49	65	81	50
C	27	29	60	51	32	32
D	45	50	48	52	37	43
E	29	40	39	26	30	33
F	82	40	40	60	51	30

Que 4: Solve the following transportation problem for Surya Ltd. By Vogel's method and find the total Expense. (14)

Destinations

Origins		D1	D2	D3	D4	Supply
	O1	1	2	1	4	30
	O2	3	3	2	1	50
	O3	4	2	5	9	20
Requirement		20	40	30	10	100

OR

Que 4: The price of a machine is Rs.9000. Its maintenance expense is Rs.200 for the first year and then it increase by Rs.2000 per year. At what time is it profitable to replace the machine?

Que 5: Write short notes on (14)

- 1) Vogel's Method to solve transportation problem
- 2) Problem of replacement.

OR

Que 5: Write short notes on

- 1) Matrix Minima method
- 2) Least cost Method