Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 07

B.COM (Sem.–3)

OPERATION RESEARCH

Subject Code : BCOP-304

Paper ID : [B1127]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

1. Answer briefly :

a) What are the basic assumptions involved in EOQ concept?

b) What are the applications of OR?

c) What are the advantages and disadvantages of having inventories?

d) What is meant by critical path?

e) What is meant by Principle of dominance?

f) Discuss the nature of operations research.

g) What are the unbalanced transportation problems?

h) What is meant by multiple discount breaks?

i) Differentiate between PERT & CPM.

j) A game refers to a situation of business conflict. Discuss.

SECTION-B

Q2 A salesman has to visit five cities A,B,C,D and E. The distance (in hundred miles) between the five cities are as follows :

	A	**B**	**C**	**D**	**E**
A	--	7	6	8	4
B	7	--	8	5	6
C	6	8	--	9	7
D	8	5	9	--	8
E	4	6	7	8	--

If the salesman starts from city A and has to come city A, which route should he select so that the total distance travelled is minimum?

Q3 We have five jobs each of which must go through two machines in the order AB, processing times are given in the table below :

Job No.	1	2	3	4	5
Machine A	10	2	18	6	20
Machine B	4	12	14	16	8

Determine a sequence for the five jobs that will minimize the total elapsed time.

Q4 Two players A and B match coins. If the coin matches, then A wins one unit of value, if the coins do not match, then B wins one unit of value. Determine optimum strategies for the players and the value of the game

Q5 Discuss various types of inventory models.

Q6 What is network analysis? Discuss the computation of PERT and CPM in detail.

Q7 What is no passing rule in sequencing algorithm? Explain the principle assumptions made while dealing with sequencing problems.