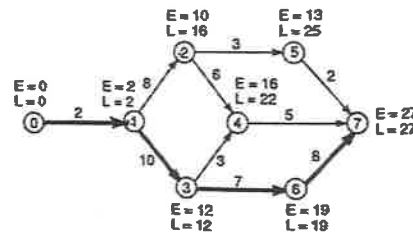


ANSWER SHEET

- Q1. Each question carries maximum 05 marks.
- A. Dominance rules, each rule 2 ½ marks, 02 rules 05 marks
- B. Each point 01 marks. 05 points total 05 marks
- C. Saddle point = (1,1)
Game value = +1
- D. Degeneracy meaning 03 marks, compensation 02 marks.
- E. A-Q, B-R, C-S, D-P, Zmin = 71
- Q2. A.



Project duration = 27, Critical path = 0-1-3-6-7 (12)

B. Operations research define 02 marks, applications 06 marks. (08)

- Q3. A. A's strategy = $(\frac{1}{2}, \frac{1}{2}, 0)$
B's strategy = $(\frac{2}{3}, \frac{1}{3}, 0)$
Game value = 0 (12)
- B. Simulation meaning 02 marks, advantages 02 marks, limitations 02 marks, applications 02 marks. (08)
- Q4. A. $X_1 = 3, X_2 = 1, Z_{max} = 11$ (12)
- B. EOQ 02 marks, models 06 marks. (08)

Q5. A.

| | A | B | C | D | Supply |
|--------|----------|----------|-----------|----------|--------|
| M1 | 2 | 3 [5] | 11 [1] | 7 | 6 |
| M2 | 1 | 0 | 6 [1] | 1 | 1 |
| M3 | 5 [7] | 8 | 15 [1] | 9 [2] | 10 |
| Demand | 7 | 5 | 3 | 2 | |

Total cost = Rs. 10,000.

(10)

B.

| Activity | To | Tm | Tp |
|----------|----|----|----|
| 1-2 | 3 | 4 | 5 |
| 2-3 | 6 | 8 | 10 |
| 2-4 | 2 | 3 | 4 |
| 3-4 | 4 | 5 | 12 |
| 4-5 | 5 | 7 | 9 |
| 5-6 | 9 | 16 | 17 |

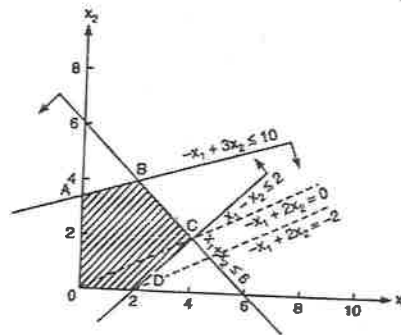
Critical path = 1-2-3-4-5-6

Expected duration = 40

Variance of the project = 41/9

(10)

Q6. A.



$$X_1 = 2, X_2 = 0, Z_{\min} = -2$$

(10)

B.

- What is the pessimistic strategy = Do not bet
- What strategy should be selected as per Hurwicz criterion with $\alpha = 0.5$ = Bet A
- What is the Savage strategy = Bet B

(d) What strategy should be selected as per Laplace criterion = Bet C

(10)