

22005

M.B.A. DEGREE EXAMINATION, MARCH/APRIL 2019.
SECOND SEMESTER

Paper V — OPERATIONS RESEARCH

Time : Three hours

Maximum : 70 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer ALL questions.

Each question carries 3 marks.

Each answer should not exceed 1 page.

1. Explain the scope of OR.
2. Explain the scope and limitations of LP.
3. Explain Network Analysis.
4. Explain the application of PERT.
5. Uses of Game Theory.

PART B — (4 × 10 = 40 marks)

Answer ALL questions.

Each question carries 10 marks.

Each answer should not exceed 5 pages.

6. Explain the objectives and nature of OR.
7. Write a note on LP.
8. What is Transportation Problem? Explain with simple example.
Or
9. Explain traveling salesman problem with example.
10. Explain the Network Analysis in OR.
Or
11. Write a note on Project Management.
12. Explain the maxmin-minmax principle.
Or
13. Write a note on game theory.

PART C — (1 × 15 = 15 marks)

(Compulsory)

14. Solve the following :

- (a) A decision-maker's preferences over the set $A = \{a, b, c\}$ are represented by the payoff function u for which $u(a) = 0$, $u(b) = 1$ and $u(c) = 4$. Are they also represented by the function v for which $v(a) = -1$, $v(b) = 0$ and $v(c) = 2$?
- (b) You are working with a friend on a joint project. Each of you can either work hard or goof off. If your friend works hard then you prefer to goof off (the outcome of the project would be better if you worked hard too, but the increment in its value to you is not worth the extra effort). You prefer the outcome of your both working hard to the outcome of your both goofing off (in which case nothing gets accomplished), and the worst outcome for you is that you work hard and your friend goofs off (you hate to be "exploited"). If your friend has the same preferences then tabulate the suitable payoffs which can be assigned.

