

MMPO-001

**Master of Business Administration (MBA)/ Master of Business Administration
(Online) MBA(OL) /Master of Business Administration (Operations
Management) (MBAOM)/ Post Graduate Diploma in Operations Management
(PGDIOM)**

**ASSIGNMENT
For
July 2023 and January 2024 Sessions**

MMPO-001: Operations Research

**(Last date of submission for July 2023 session is 31st October 2023
and for January 2024 session is 30th April, 2024)**



**School of Management Studies
INDIRA GANDHI NATIONAL OPEN UNIVERSITY
MAIDAN GARHI, NEW DELHI – 110 068**

ASSIGNMENT

Course Code	:	MMPO-001
Course Title	:	Operations Research
Assignment Code	:	MMPO-001/TMA/ JULY/2023
Coverage	:	All Blocks

Note: Attempt all the questions and submit this assignment to the Coordinator of your study centre. Last date of submission for July 2023 session is 31st October, 2023 and for January 2024 session is 30th April 2024.

1. Define Operations Research? Describe the main characteristics of Operations Research. Discuss the significance and scope of Operations Research in modern management.
2. What is dynamic programming? Discuss the applications of dynamic programming in decision-making. How is this different from linear programming? Explain.
3. Write a short note on the following.
 - a. Saddle point in Game theory.
 - b. Assignment problem.
 - c. Monte Carlo Simulation.
 - d. Sensitivity Analysis in linear programming.
4. What is a queue? What are the basic elements of queues? Explain the basic queuing process and its applications in industrial management.
5. What is a transportation problem? What are the various methods for finding the Initial Basic Feasible Solution (IBFS)? Explain the steps involved in Vogel's Approximation Method (VAM)?