SYLLABUS

Paper Code: MS - 14

Paper Title: Systems Approach to Management and Optimization Techniques

Maximum Marks: 100 (External: 80 + Internal: 20) **Time : 3 Hrs.**
Number of Lectures: 90 (45 minutes duration)

L	P
6	0

OBJECTIVE: This course enables students to be familiar with different types of Info systems, basics of DR and its practical problems.

Note:

(i) The Question Paper will consist of Four Units.

(ii) Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.

(iii) The students are required to attempt ONE question from each unit and the Compulsory question.

(iv) All questions carry equal marks unless specified.

UNIT-I

1. **Concepts of Computer Based Systems:** Data, Information, Information Systems, Model of computer based information system; Introduction to Management Information System, Decision Support System and Knowledge Based Systems.
2. **Accounting Information System:** Characteristics, sample system, subsystems for filling customer order, order replenishment stock, performing general ledger processes; features and use of Accounting Information System Package-Tally.
3. **Marketing Information System:** Basic concepts, model, subsystems including Marketing Research, Marketing Intelligence, Product, Place, Promotion and Pricing subsystems.

UNIT-II

4. **Manufacturing Information System:** Model and subsystems including Accounting information, Industrial Engineering, Inventory, Quality and Cost Subsystems.
5. **Financial Information System:** Model and Subsystems including Forecasting, Funds Management and Control Subsystems.
6. **Human Resources Information Systems:** Model and Subsystems including human resources research, human resources intelligence, HRIS Database, HRIS output.

UNIT-III

7. **Basics of Operations Research (OR):** Origin and Development of OR, Characteristics of OR, Models in OR, OR and Decision Making, Role of Computers in OR, Limitations of OR.
8. **Linear Programming:** Mathematical Formulation, Graphical and Simplex method, Duality in Linear programming, Dual Simplex Method, The Revised Simplex Method, Sensitivity Analysis.

UNIT-IV

9. **Special types of Linear Programming problems:** Transportation and Assignment problems.
10. **Integer Programming:** Introduction, Branch and Bound Techniques, Binary Linear Programming, Assignment & Travelling salesman problems.
11. **Dynamic Programming:** Deterministic & Probabilistic Dynamic Programming.