Exam. Code: 0313
Sub. Code: 25390

2124

M.Com. (E. & F.B.) Third Semester

FB-305: IT Applications and Operations Research in Family Business Management

Time allowed: 3 Hours **Max. Marks: 80**

NOTE: *Attempt five questions in all, selecting atleast two questions from each Unit. All questions carry equal marks.*

x-x-x

Unit – I

Q1: Explain the role of computers in modern management practices. How have personal computers transformed managerial functions in organizations? Discuss the evolution of computer usage in management from the early stages to current applications.

Q2: Describe the various managerial applications of computers across different management functions. How do computers enhance decision-making in areas such as finance, inventory management, and human resource management?

Q3: Explain how computers are used in computer-based financial systems. What are the key components of a computerized financial system, and how do these systems improve financial management within organizations?

Q4: Analyze the role of computers in human resource management (HRM). How do computer applications facilitate various HR functions, such as recruitment, performance appraisal, training, and employee records management?

Q5: Discuss the concept of information needs and its economics in the context of MIS. How do organizations determine the value of information, and what factors influence the cost-benefit analysis of implementing an MIS?

Unit – II

Q6: Define Linear Programming (LP) and explain its meaning, assumptions, advantages, scope, and limitations. How does Linear Programming assist managers in decision-making processes? Provide examples of real-world applications.

Q7: A company produces two types of products, X and Y. Product X yields a profit of $30 per unit, and Product Y yields a profit of $40 per unit. Each unit of Product X requires 2 hours of labor and 3 units of material, while each unit of Product Y requires 4 hours of labor and 2 units of material. The company has a total of 100 labor hours and 90 units of material available. Formulate this problem as a Linear Programming model and solve it using the graphical method to determine the optimal production quantities of Products X and Y.

Contd.....P/2

Q8: A company has three warehouses (W1, W2, W3) and four retail stores (S1, S2, S3, S4). The supply at the warehouses is 20, 30, and 25 units, respectively, and the demand at the stores is 15, 20, 25, and 15 units, respectively. The transportation costs per unit between warehouses and stores are given below:

	S1	S2	S3	S4
W1	4	6	8	10
W2	5	3	7	6
W3	6	5	4	3

Formulate this problem as a transportation problem and solve it using the VAM.

Q9: Define Assignment Problems in the context of Operations Research. Discuss their role as business decision models and how they differ from Transportation Problems. Provide examples of scenarios where Assignment Problems can be effectively applied.

Q10: Compare and contrast PERT (Program Evaluation and Review Technique) and CPM (Critical Path Method) in project management. What are the key differences between these two techniques, and how are they used to manage different types of projects?

x-x-x