

(2½ Hours)

[Total Marks: 75]

- N. B.: (1) **All** questions are **compulsory**.
 (2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
 (3) Answers to the **same question** must be **written together**.
 (4) Numbers to the **right** indicate **marks**.
 (5) Draw **neat labeled diagrams** wherever **necessary**.
 (6) Use of **Non-programmable** calculators is **allowed**.

1. **Attempt any three of the following:** 15
 - a. Describe the architecture of business intelligence.
 - b. Explain Data Information and Knowledge.
 - c. Define system. Explain how system can be characterized.
 - d. What is business intelligence? Why effective and timely decision is important?
 - e. Explain the phases of decision making process system.
 - f. Explain the major potential advantage derived from adoption of a DSS.

2. **Attempt any three of the following:** 15
 - a. Explain the primary phases of model.
 - b. What is predictive and optimization model?
 - c. Explain some of the areas where data mining is used.
 - d. Write short notes on analysis methodology of data mining.
 - e. What is meant by data validation? Explain different kinds of data validation.
 - f. Write short note on data transformation.

3. **Attempt any three of the following:** 15
 - a. Explain Phases and Taxonomy of classification model.
 - b. Write short notes on evaluation of classification model.
 - c. Assume your own training dataset and predict the class label of an unknown sampling using Naïve Bayesian classification.
 - d. Differentiate between following clustering methodologies: i) Partitioning method.
ii) Hierarchical method.
 - e. Explain evaluation of clustering model.
 - f. Explain k-means method.

4. **Attempt any three of the following:** 15
 - a. What is marketing decision process? Explain relational marketing in details.
 - b. Write short note on sales force management.
 - c. Explain market basket analysis.
 - d. List revenue management system. Explain any one in detail.
 - e. What is supply chain optimization?
 - f. Explain CCR model in detail.

5. **Attempt any three of the following:** 15
 - a. What is meant by knowledge management system?
 - b. Explain knowledge management activities.
 - c. Explain the role of people in knowledge management.
 - d. Compare and contrast between Artificial intelligence versus Natural intelligence.
 - e. Write short note on knowledge engineering.
 - f. What are the applications of expert systems?