Business Intelligence

[Time: 2.30 Hrs]   **[Marks:75]**

Please check whether you have got the right question paper.

N.B: 1. All question are compulsory.
        2. Figures to the right indicate full marks.

Q.1 Attempt **any three** of the following: **15**

a. Explain business intelligence architecture with the help of a diagram.
b. Write a short note on Data, Information and knowledge with respect to BI.
c. Explain mathematical models and its advantages.
d. What is decision support system (DSS)? What are the factors that affect the degree of success of a DSS?
e. What is a System? Explain Open and Closed Systems with the help of a suitable diagram.
f. Explain decision and problem solving. List and explain various factors affecting decision-making process.

Q.2 Attempt **any three** of the following: **15**

a. Define the mathematical model. Explain its type.
b. Explain the divisions of mathematical models according to their characteristics, Probabilistic nature, temporal dimension.
c. Difference between supervised and unsupervised learning.
d. Explain the Data Mining process in detail.
e. Explain the importance of Data validation.
f. Write difference between structured and unstructured data.

Q.3 Attempt **any three** of the following: **15**

a. Explain top-down induction of decision tree. Examine the components of the top-down Induction of decision trees procedure.
b. What are the criteria used to evaluate classification methods?
c. Write a short note on Naive Bayesian classifiers.
d. What is Clustering? Explain its methods.
e. Explain K-means algorithms with steps and example.
f. Write a short note on confusion matrix.

Q.4 Attempt **any three** of the following: **15**

a. What does relational Marketing? Explain in detail.
b. Explain the concept of Market basket analysis.
c. Explain Revenue management systems in detail.
d. Write a short note on CCR model.
e. What is mean by Cross-efficiency analysis?
f. Write short note on Data envelopment analysis.

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Q.5 Attempt **<u>any three</u>** of the following: **15**

a.   Define knowledge management. What are data, information and knowledge?
b.   Explain in detail KMS cycle.
c.   What is Organizational Learning?
d.   Explain characteristics of expert systems.
e.   Explain forward chaining and backward chaining.
f.   Write different Applications of AI.

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