**Question Bank Business Intelligence**

**Unit – 1**

What are the enabling factors of business intelligence projects?
What is business intelligence? Hence explain its purpose.
Explain the role of mathematical models.
What are the different Types of decisions based on their nature? Explain
Describe the phases in the development of a DSS.
With a diagram explain the typical business intelligence architecture.
Explain the importance of effective and timely decisions in Business Intelligence.
Explain the role of mathematical models.
What is Business Intelligence? Why Effective and timely decisions are must?
Explain business intelligence architecture
Explain the phases in the development of business intelligent system.
Explain the logical structure of decision-making process.
Define system. Explain its structure.
Explain classification of decisions according to their nature.
Explain the role of mathematical models.
Describe the phases in the development of a DSS.
With a diagram explain the typical business intelligence architecture.
What are the main components of a business intelligence system? Explain.
With an example explain structured, unstructured and semi structured decisions.
Explain the Cycle of a business intelligence analysis.
What are the factors that affect the degree of success of a DSS?

**Unit 2**

Write a note on predictive and risk analysis models.
What are the main phases of the data mining process?
List down and explain the development of mathematical models for decision making.
What is sampling? What are the different types of it?
What is the difference between OLAP, statistics & data mining?
What are the different types of models based on temporal dimension?
What are different methods of normalization of data?
What is the difference between OLAPS statistics & data mining?
What is data mining? Explain any two applications of it.
What are the steps in the development of data mining models
With an example explain the different types of input data.
Why is data reduction required? Explain the ways to perform it.
Explain the division of mathematical models according to their probabilistic nature.
What are the basic data mining tasks?
Differentiate between OLAPS statistic & data mining?
Who are the actors & roles in the data mining process?
How can you correct incomplete data? Explain.
What do you mean by standardization of data? Explain.

**Unit 3**

Briefly outline how to compute the dissimilarity of ordinal attributes.
What are the phases of the classification model? Explain.

Apply k-means clustering to the following points and create three cluster using A1, B1 and C1 as centres of initial clusters and Euclidean formula as distance measure.
A1(2,10),A2(2,5) , A3(8,4) ,B1(5,8),B2(7,5) ,B3 (6,4),C1(1,2),C2(4,9)
What are the types of Hierarchical methods? Explain.
Explain in brief about interval – scale and ordinal variables.
Define and explain the Information gain method.
Write a k-medoid algorithm for clustering.
Briefly outline how to compute the dissimilarity of binary variables.
Briefly explain top-down induction of the decision tree.
Outline the back propagation algorithm.
Apply k-means clustering to the following points and create three cluster using A2, B2 and C2 as centers of initial clusters and Euclidean formula as distance measure.
A1(2,10), A2(2,7) , A3(7,4) ,B1(5,8),B2(7,5) ,B3 (6,4),C1(1,2),C2(4,9)
With an example explain the information gain index.
Outline the back propagation algorithm.
write note on clustering-based partition method.
Discuss the problems of the k-means algorithm. How to improve them. Explain.
What are the requirements of clustering methods?
Compute the gain ratio for the attribute income

| RID | age | income | student | credit_rating | Class: buys_computer |
|---|---|---|---|---|---|
| 1 | youth | high | no | fair | no |
| 2 | youth | high | no | excellent | no |
| 3 | middle_aged | high | no | fair | yes |
| 4 | senior | medium | no | fair | yes |
| 5 | senior | low | yes | fair | yes |
| 6 | senior | low | yes | excellent | no |
| 7 | middle_aged | low | yes | excellent | yes |
| 8 | youth | medium | no | fair | no |
| 9 | youth | low | yes | fair | yes |
| 10 | senior | medium | yes | fair | yes |

Use Naïve Bayesian Classification and predict the class label whether a customer will buy the computer or not with the following attribute values:
X = (age = youth , income = medium , student = yes , credit rating = fair)
The following is the training data set:

| RID | age | income | student | credit_rating | Class: buys_computer |
|---|---|---|---|---|---|
| 1 | youth | high | no | fair | no |
| 2 | youth | high | no | excellent | no |
| 3 | middle_aged | high | no | fair | yes |
| 4 | senior | medium | no | fair | yes |
| 5 | senior | low | yes | fair | yes |
| 6 | senior | low | yes | excellent | no |
| 7 | middle_aged | low | yes | excellent | yes |
| 8 | youth | medium | no | fair | no |
| 9 | youth | low | yes | fair | yes |
| 10 | senior | medium | yes | fair | yes |

**Unit 4**

Describe the price efficiency with example.
Discuss the tasks performed in managing a sales force.
Differentiate between cross-selling and up-selling
Describe the DEA process model.
Write a short note on Charnes-Cooper-Rhodes(CCR) model.
List and explain the components of Relational Marketing.
Explain allocative efficiency in detail.
What is relational marketing? What are the Motivations and objectives of relational marketing?
What is Salesforce management? What are the different types of activities on which Salesforce taxonomy is based?
What is a Customer Lifeline value graph?
What is Data envelopment analysis? How is efficiency measured?
Discuss the need for using relational marketing.
Write note on the Lifetime of a customer.

**Unit 5**

Define Expert System? What are the features of Expert Systems?
Describe the knowledge management system cycle.
What are the problems and limitations of the expert system?
Describe the process of knowledge creation.
Explain relationship between data, Information and Knowledge
Differentiate between AI and Natural Intelligence
What are the problem areas suitable for expert systems?
What are the generic categories of expert systems?
State the activities of knowledge management.
Explain the Knowledge discovery in the database.
Define Knowledge Management. Hence List the characteristics of it.
What are the major activities in knowledge engineering? Explain
Define a knowledge repository and describe how to create one.
Explain relationship between data, Information and Knowledge
How do expert systems develop? Explain.