

Department of Computer Science & Engineering
Motilal Nehru National Institute of Technology Allahabad
End Sem. Examination (EVEN-Semester) 2017-18

M.M. : 60

Class: B.Tech. 6th Sem. (Information Technology)
Subject: Business Intelligence (Code: CS1608)

Time :Three Hours

- Note: 1. ALL Questions are compulsory.
2. Write to the point. Make & State necessary assumptions.

Q1-(a) Describe the term Data Warehouse (DW) and explain its infrastructural components? How does DW support Business Intelligence?
(b) What is OLAP? Draw a diagram illustrating role of OLAP tools in Business Intelligence. (5+5)

Q2-(a) Explain the concept of Naive Bayes Classifier.

- (b) A diagnostic test has a probability 0.95 of giving a positive result when applied to a person suffering from a certain disease, and a probability 0.10 of giving a (false) positive when its applied to a non-sufferer. It is estimated that 0.5% of the population are sufferers. Suppose that the test is now applied to a person about whom we have no relevant information relating to the disease (apart from this fact that he/she comes from this population). Calculate the following probabilities using Bayes' Rule.
(i) that, given a positive result, the person is a sufferer.
(ii) that, given a negative result, the person is a non-sufferer. (5+5)

Q3-(a) What is Dimensional Data Modelling (DDM)? Explain the concepts with suitable example.

- (b) All Electronics companies have sales department. Sales consider four dimensions namely Time, Item, Branch and Location. The schema contains central fact table Sales with two measures Rupees-sold and Unit- sold. Define Star schema and Snowflake schema for above case. (5+5)

Q4-(a) What are the various methods by which classification of data is done? Discuss each methodology.

- (b) Calculate the standard deviation for the following data set:
(i). 13, 21, 27, 31, 35, 24, 28, 32, 17, 20
(ii). The frequency table of the monthly salaries of 20 people is shown below calculate the standard deviation.

Salary (Rs.)	35000	40000	42000	43000
Frequency	5	8	5	2

(5+5)

Q5-(a) With respect to Decision Support System (DSS) discuss the following topics:

- (i) DSS Classification (ii) DSS Technology levels
(b) Explain Enterprise Resource Planning using an example of Packaged Food Industry. (5+5)

Q6- Explain the following terms:

- (a) TAPS (The Assessment Profiling System)
(b) Decision Tree
(c) K- Nearest Neighbors Algorithm
(d) EIS (Executive Information System) (2.5*4)

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