

B. Tech

TCS- 031

(Sem-VII) Theory Exam 2009-10

Data Mining & Data Warehousing.

3 Hrs.

Marks : 100

Attempt all Questions

1. Attempt 4 parts
 - a. Explain data mining process with neat digm.
 - b. What do you mean by data clearing ?
 - c. Explain clustering and regression with example.
 - d. What is Z-score normalization.
 - e. Distinguish between dimensionality reduction and numerosity reduction.
 - f. Explain histogram. The following data are a list of prices of commonly sold items at a company. The number have been sorted 1,1,5,5,5,8,8, 10,10,15,15, 15,20,20,20,20,20. than a histogram for price using singleton buckets.

2 Attempt any **four** parts : 5×4=20

- (a) What do you understand by the terms data characterization in content to concept description ?
- (b) With the help of suitable example, explain data discrimination in brief.
- (c) List out the reasons, why we perform attribute relevance analysis ?
- (d) What are the main purposes of statistics, used in data mining ?
- (e) What do you understand by outliers ?
- (f) What do you mean by association rules, for what purposes it is being used ? Explain with example.

3 Answer any **two** parts : 10×2=20

- (a) What are the different classification techniques ? Discuss issues regarding classification and prediction.
- (b) What do you mean by neural network ? Explain multilayer Feed-Forward neural network. Differentiate between Feed-Forward and Feedback system.
- (c) What do you mean by decision tree ? Describe ID3 algorithm of the decision tree. Why it is unsuitable for data mining applications ?

4 Attempt any **two** parts : 10×2=20

- (a) Define the data warehousing with suitable example, why we need a separate data warehouse ? Differentiate between OLAP and OLTP.
- (b) What is a multidimensional data model ? How we convert tables and spreadsheets to Data cubes ? Convert 2-D tables into 3-D data cubes.
- (c) (i) Explain Snow - Flake schema with an example.
(ii) Explain fact constellation with an example.

5 Attempt any **two** parts : 10×2=20

- (a) Explain OLAP functions and tools in brief. What are the main features of OLAP servers ?
- (b) What do you mean by aggregation ? Explain in brief, how the OLAP handles aggregation ? Write the differences between MOLAP and HOLAP.
- (c) Write short notes on :
 - (i) Slice and Dice operations
 - (ii) Testing of data warehouses.

