



ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF, SCIENCE, TECHNOLOGY, AGRIC AND FOOD SYSTEMS
DEVELOPMENT

DEPARTMENT OF DIGITAL TECHNOLOGY AND INFORMATION SYSTEMS

EXAMINATION PAPER

COURSE CODE : CDT 413/MIS 226
COURSE TITLE : Data Mining and Data Warehousing
SPECIAL REQUIREMENTS : None
DURATION : 3 Hours
LEVEL : 4.2/2.2
DATE : 07 DEC 2023

INSTRUCTIONS TO CANDIDATES:

1. Answer any 4 Questions from the whole paper.
2. The total Marks for the examination is 100.
3. The marks allocation for each question are indicated in square brackets [].

QUESTION 1

a) Describe the architecture, characteristics, and issues associated with each of the following categories of OLAP tools:

- (i) MOLAP [7]
- (ii) ROLAP [7]
- (iii) HOLAP [7]

(b) Discuss how data mining can realize the value of a data warehouse. [4]

[TOTAL 25]

QUESTION 2

The ultimate goal of data warehousing is to integrate enterprise wide corporate data into a single repository from which users can easily run queries, produce reports, and perform analysis.

Justify the need for data warehousing [25]

[TOTAL 25]

QUESTION 3

a) Give an outline of different problems which are associated with data warehousing [9]

b) Compare and contrast OLTP and OLAP [8]

c) Explain, with examples, the meaning of the following OLAP terms

- (i) drill down,
- (ii) Rollup,
- (iii) Slice, and
- (iv) pivot

[8]

[TOTAL 25]

QUESTION 4

A wholesale furniture company wants to design a data warehouse for the analysis of the company's situation with respect to the Furniture, Customers and Time. Moreover, the company needs to analyse:

- the furniture with respect to its type (chair, table, wardrobe, cabinet. . .), category (kitchen, living room, bedroom, bathroom, office. . .) and material (wood, marble. . .)

- the customers with respect to their location, by considering at least cities, regions and states

The main objective of the company is to know at least the quantity, income and discount of its sales.

a) Identify facts, measures and dimensions to satisfy the main objectives of the company. [6]

b) Design a star schema to analyse the company's above needs. [19]

QUESTION 5

Compare and contrast OLTP and Data Warehousing.

[25]

[TOTAL 25]

End of Paper

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