



ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF HEALTH, SCIENCE AND TECHNOLOGY

DEPARTMENT OF DIGITAL TECHNOLOGY

EXAMINATION PAPER

COURSE CODE	:	CDT 413
COURSE TITLE	:	Data Mining and Data Warehousing
SPECIAL REQUIREMENTS	:	None
DURATION	:	3 Hours
LEVEL	:	4.2
DATE	:	11 FEB 2022

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

One problem area with the DDBMSs is that of distributed database design.

- (a) Discuss the issues that have to be addressed with distributed database design. [20]
(b) Outline the benefits of OLAP [5]

[TOTAL 25]

QUESTION 2

- (a) Present a diagrammatic representation and explanation of the typical architecture and main components of a data warehouse. [20]
(b) Explain what is meant by the following terms, when describing the characteristics of the data in a data warehouse:

- (i) Subject-oriented [2]
(ii) Time-variant [2]
(iii) Non-volatile. [2]

[TOTAL 25]

QUESTION 3

- 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 4

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 5

- 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]

End of Paper