

PAN AFRICA CHRISTIAN UNIVERSITY

BACHELORS OF INFORMATION COMMUNICATION TECHNOLOGY

END OF TERM EXAMINATION

DEPARTMENT: COMPUTING & INFORMATION TECHNOLOGY

COURSE CODE: BIT 407

CAMPUS: ROYSAMBU

COURSE TITLE: BUSINESS INTELLIGENCE AND ANALYTICS

EXAM DATE: FRIDAY

TIME: 5:30PM – 8:30PM

INSTRUCTIONS

- This exam carry a total of SIX Questions of [10 Marks Each]
- Section One (I) is compulsory.
- Answer any 3(Three) Questions from Section Two (II)
- Read all questions carefully before attempting.

Section ONE Compulsory

Question One

- a) Business Intelligence is an applications and technologies that help companies to analyze changing trends in market share; changes in customer behavior and spending patterns; customers' preferences; company capabilities; and market conditions.

Discuss how BI would help achieve the above-named characteristics;

- i. Customer behavior.
- ii. Company capabilities
- iii. Market conditions
- iv. Spending patterns.

[4 Marks]

- b) Discuss how the following attributes of BI would work to achieve the underlying Goals.

- i. Timeliness.
- ii. Accuracy.
- iii. Acceptance.

[3 Marks].

- c) The Business Intelligence concepts can be decomposed into the following Parts, discuss each.

- i. Data Capture.
- ii. Data Access/& Analysis.
- iii. Data Storage

[3 Marks]

Section Two (II) Answer any 3 questions

Question Two.

- a) Explain the importance of data cleansing during data capture and acquisition.

[4 Marks].

- b) Explain the term data transformation and its relevance in data warehouse.

[3 Marks].

- c) Illustrate the following forms of data storage before it can be considered prime for use by any business intelligence and analytic tool.

- i. Data Marts
- ii. Central Data warehouse.
- iii. Distributed Data warehouse.

[3 Marks]

Question THREE 10 Marks:

Analyze and discuss the application of business intelligence and analytics using the following areas of operation;

- a) College enrollment and admissions department.
- b) E-Commerce Industry.

[5 Marks].

[5 Marks]

Question FOUR 10 Marks:

- a) Discuss how you would explain if a software or a machine has passed a Turing test. **[2 Marks].**
- b) Discuss the architecture and structure of any data warehouse. **[3 Marks].**
- a) Using a diagram, illustrate the structure of decision trees and their applications. **[5 Marks].**

Question Five 10 Marks:

- a) Highlight in details TWO major challenges that affect Business intelligence in the area of machine learning. **[4 Marks].**
- b) Enumerate any THREE programming languages where BI is developed. **[6 Marks]**

Question Six 10 Marks:

- a) Give an overview of a Distributed Intelligent agent. **[2 Marks]**
- b) Discuss the following characteristics of machine learning agents under the following subtopics;
 - i. Rationality. **[2 Marks]**
 - ii. Mobility. **[2 Marks]**
 - iii. Learning/adaptation. **[2 Marks]**
 - iv. Veracity. **[2 Marks]**

-END-