

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: MONDAY

TIME: 8:00AM – 11:00AM

INSTRUCTIONS

- This exam carries 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

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

- a) College enrollment and admissions department. **[3 Marks].**
- b) E-Commerce Industry. **[3 Marks]**
- c) Explain the importance of data cleansing during data capture and acquisition. **[4 Marks].**

Section Two (II) Answer any 3 questions

Question Two.

- 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]**

Question THREE 10 Marks:

- 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.
- i. Discuss TWO ways how the utilization of customer data through BI will contribute to improving customer satisfaction and loyalty at Pac University. **[4 marks]**
- ii. Explain how business intelligence tools assist in monitoring and analyzing market trends, competitor activities, and industry dynamics. **[2 marks]**
- iii. Discuss TWO roles of business intelligence in analyzing spending patterns of customers and how it aids in developing targeted pricing strategies for a mobile telephony company. **[4 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. **[2 Marks]**.

b) Enumerate any THREE programming languages where BI is developed. **[6 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. **[3 Marks]**

Question Six 10 Marks:

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

i. Timeliness.

ii. Accuracy.

iii. Acceptance. **[6 Marks]**.

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

i. Data Capture.

ii. Data Access/& Analysis. **[4 Marks]**

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