

PAN AFRICA CHRISTIAN UNIVERSITY

BACHELOR OF BUSINESS INFORMATION TECHNOLOGY

END OF SEMESTER EXAMINATION

DEPARTMENT: COMPUTING AND INFORMATION TECHNOLOGY

COURSE CODE: BIT407

COURSE TITLE: BUSINESS INTELLIGENCE AND ANALYTICS

CAMPUS: ROYSAMBU

EXAM DATE: XXXXX XXXXX/APRIL,2021

TIME: XXXXX

INSTRUCTIONS

- This exam script has **TWO (2)** sections.
- Read all questions carefully before attempting.
- Answer All questions in Section **A** and any other Three questions in Section **B**.
- Write only your **student number** on the answer booklet provided.

SECTION A

(Answer ALL questions in this section)

Question 1:

a) Business Performance Management operates around the concept of Key Performance Indicators (KPIs). Explain. **[2 Marks]**

b) "Business intelligence focuses on descriptive analytics." Justify this statement.

[3 Marks]

c) Identify the text mining tools used in the following techniques:

[2 Marks]

i. Information Extraction

ii. Information Retrieval

d) "ETL is a 3-step process in data warehouse." Explain.

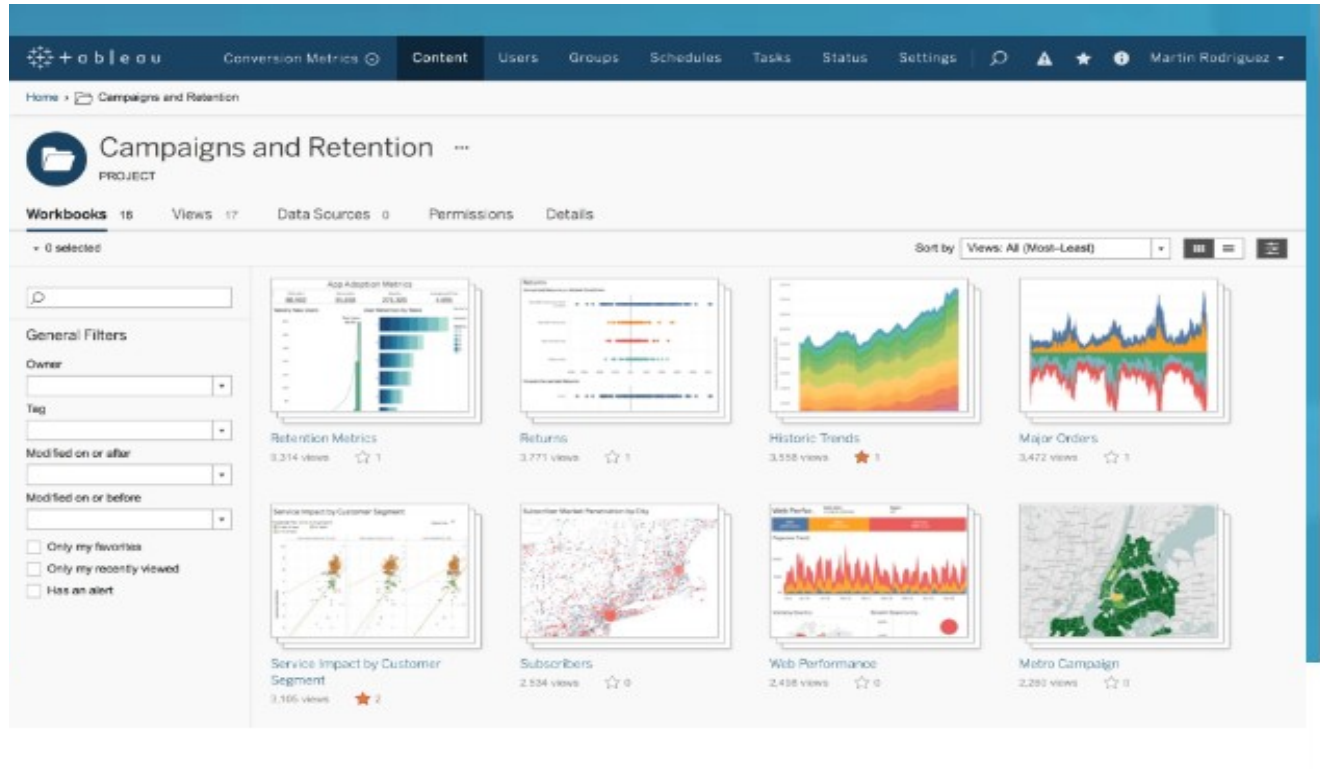
[3 Marks]

SECTION B

(Answer any THREE (3) questions in this section)

Question 2:

a) Given the following data visualization tool.



- Identify the name of the tool. **[1 Mark]**
- Describe importance of using the above tool. **[3 Marks]**
- State three features of the above tool. **[3 Marks]**

b) Outline three examples of business intelligence tools Kenya Revenue Authority will require on their recently acquired enterprise resource planning (ERP). **[3 Marks]**

Question 3:

- Justify why data mining is classified under predictive analytics. **[5 Marks]**
- Prescriptive analysis is considered to be a step further ahead of predictive analytics and substantially different from it. Discuss why, provide an example of each.

[5 Marks]

Question 4:

- Explain how business Intelligence has impacted on the following, giving an appropriate example from the Kenyan context:- **[10 Marks]**

- i. Education
- ii. Tourism and Hospitality
- iii. Banking
- iv. Retail and e-commerce
- v. Manufacturing

Question 5:

a) Suppose that you are in the market to purchase a data mining system. Highlight four features you will look for when selecting the system. **[4 Marks]**

b) If a database is given sufficient size and quality, data mining technology can generate new business opportunities. Examine three data mining functionalities and illustrate their applicability in a realistic scenario. **[6 Marks]**

Question 6:

a) "A data warehouse is subject-oriented, integrated, time-variant and non-volatile." Using an example, explain what is meant by these terms. **[4 Marks]**

b) Tina is an industrious student studying for the TAR exam. After she had gone through all the available lecture slides, she decided to take a look at the reading materials provided by prof. XYZ. Unfortunately, she soon became utterly frustrated, as the reading materials are practically endless. Thinking about the generations to come, Tina decided to make their lives easier. For every learning outcome, she (1) read all the materials and highlighted paragraphs that are concerned with it, and (2) went through all the highlighted paragraphs, writing a summary that covers all the materials about that learning outcome. After devoting her entire summer to this, she managed to complete the first three chapters of TAR. Luckily, this effort resulted in a dataset that, for each of the learning outcomes, contains a set of related paragraphs, along with the summary of this set. As a top-tier TAR student, she quickly realized she could make a

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supervised model. Being highly confident in your TAR abilities, she outsources this task to you.

Required

- i. Highlight two advantages of using supervised model. **[2 Marks]**
- ii. Explain two supervised learning algorithms you will use. **[4 Marks]**

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