UNITED INTERNATIONAL UNIVERSITY
Department of English

Mid-term Examination

Trimester: Spring **Year: 2024**

Course Code: ENG 1013 **Course Title: English II**

Time: 1 Hour 30 minutes **Full Marks: 30**

Reading &Writing: 20 **Listening & Speaking: 10**

***Note: Students need to answer all the questions on the answer script, not on this question paper.**

****Any examinee found adopting unfair means will be expelled from the trimester/ programme as per the UIU disciplinary rules.***

Part A: **Reading (CO2 & PO1): 12**

The right-hand margin shows marks carried by individual questions.

Read the passage and answer the following questions.

Data mining is a process that involves extracting useful information from large sets of data. It utilizes various techniques, such as statistics, machine learning, and pattern recognition, to uncover hidden patterns, relationships, and trends within the data. This information can then be used to make informed decisions, predict future outcomes, and gain valuable insights. Companies use data mining to learn more about their customers and develop better marketing strategies. It can also help them increase sales and decrease costs. Data mining relies on effective data collection, warehousing, and computer processing.

One of the key steps in data mining is data pre-processing. This involves cleaning and transforming the raw data into a format that can be easily analysed. This may include removing duplicates, handling missing values, and normalizing the data. Once the data is pre-processed, it can be subjected to various data mining algorithms.

There are several popular data mining algorithms, each with its own strengths and weaknesses. For example, decision trees are commonly used for classification tasks, while clustering algorithms are used to group similar data points together. One important concept in data mining is the k-Nearest Neighbour (KNN) learning algorithm. This algorithm is used to group data based on similar sets of parameters. The value of k in k-NN is significant because it determines the number of nearest neighbours that are considered when classifying data. A higher value of k may result in a more accurate grouping, but it can also increase computational complexity. Another important aspect of data mining is association rule mining, which involves finding relationships between objects in a database. Market basket analysis is a type of association rule mining that helps retail businesses maximize profits from business transactions. By studying customer behaviour and shopping trends, marketers can design catalogues and improve marketing strategies to increase profits.

Data mining has numerous applications in various fields. For example, it can be used to detect disturbances in the ecosystem, such as floods and droughts, by analysing data collected from remote sensing and earth science techniques. This helps in preventing environmental and societal problems. In sports, data mining can be used to predict game outcomes and improve player performance. Coaches use data mining tools to analyse archived data and

make predictions based on the history of the game. In marketing also, it can be used to identify customer segments and target specific advertisements. Further in healthcare, it can help in predicting disease outcomes and improving patient care. In finance, it can assist in detecting fraudulent activities and making investment decisions.

However, data mining also raises concerns about privacy and ethics. As large amounts of personal data are being collected and analysed, there is a need to ensure that individuals' privacy rights are protected. Additionally, there is a risk of bias and discrimination if the data used for mining is not representative of the entire population.

In conclusion, data mining is a powerful tool that can uncover valuable insights from large datasets. It can help businesses and organizations make better decisions by analysing large amounts of data. It has a wide range of applications in various fields, including environmental monitoring, sports, and retail business, and can be used to make informed decisions in various fields. However, it is important to address privacy and ethical concerns to ensure the responsible use of data mining techniques.

1A. Choose and write the best option for the following questions. **0.5x4=2**

i. What is one of the key steps in data mining?

a. Cleaning and transforming raw data into a format that can be easily analysed.
b. Using statistics, machine learning, and pattern recognition techniques.
c. Identifying customer segments and targeting specific advertisements.
d. Predicting disease outcomes and improving patient care.

ii. Which technique is commonly used to group similar data points together?

a. Decision trees
b. Clustering algorithms
c. Association rule mining
d. Data pre-processing

iii. What concern does data mining raise about privacy?

a. Ensuring individuals' privacy rights are protected.
b. Detecting fraudulent activities and making investment decisions.
c. Addressing bias and discrimination in the data.
d. Handling missing values and normalizing the data.

iv. What are some techniques used in data mining to uncover hidden patterns and trends within the data?

a. Cleaning and transforming raw data into a format that can be easily analysed.
b. Using statistics, machine learning, and pattern recognition techniques.
c. Identifying customer segments and targeting specific advertisements.
d. Predicting disease outcomes and improving patient care.

1B. In the context of the above passage, write the word that matches the suitable words in accordance with the definition provided below. **0.5x4=2**

privacy, algorithm, pre-processing, data mining, classification

i. _____ includes removing duplicates, handling missing values, and normalizing the data.

ii. _____ is a set of rules or instructions used in data mining to perform specific tasks or calculations on the data.

iii. _____ is the process of categorizing or grouping data based on certain criteria or characteristics.

iv. _____ is the state of being free from unauthorized access or intrusion into one's personal information.

1C. Write short answers to the following questions in your own words.

i. What is the purpose of data pre-processing in data mining? **1**

ii. Describe one popular application of data mining. **1**

iii. In what ways does Association rule mining help in business development? **2**

1D. Summarize the provided above passage in your own words. Copying word-for-word (i.e. verbatim) of the text will reduce your marks. **4**

Part: B **Writing (CO1 & PO 3a): 08**

Students need to answer all questions on the answer script, not on this question paper.

2A. Identify the sentence-skills mistakes in the following paragraph. Then correct and write the appropriate sentences in the space provided. **0.5x4=2**

fragment	**subject-verb-agreement**		**wrong preposition**
missing comma	**homonym**	**run-on**	**mistake in verb tense**

There are two secrets to making the best chocolate chip cookies. [1]First you should always used melted butter, as it produces the chewiest cookies. This way, [2]you doesn't need a mixer to mix the dough, you can just use your hands or a spoon. Be careful, however, to not use too much butter because it can make your baked cookies greasy. [3]The second secret. Using a mix of brown and white sugar. The [4]moisture under brown sugar promises an extra soft cookie. White granulated sugar is still necessary, though. It's dry and helps the cookies spread.

1. _____

2. _____

3. _____

4. _____

2B. Write a paragraph in about 150- 200 words on any one of the following topics provided. You must show the plan of development/outline of your paragraph. 1+5= 6

i. Types of books that I read (Classification)
ii. A day without internet (Narrative)
iii. How to give a good presentation (Process)
iv. My dream apartment (Descriptive)

Topic: A dream

Topic Sentence: I have been and a long

Supporting Point 1: _____

Supporting Point 2: _____

Supporting Point 3: _____

Concluding Sentence: _____

3. Listening (CO 3 & PO 1) 5

4. Speaking (CO 4& PO 3A) 5