HOMEWORK

OPEN-BOOK TEST

Please follow the directions below before answering the questions:

1. **Use the Resources Wisely**: *While you can refer to your notes, textbooks, and other resources, avoid relying too much on them. The goal is to understand and apply the concepts, not just find answers*.

2. **Manage Your Time**: *Open-book tests may seem easier, but they often require careful time management. Don't spend too much time looking up every answer—prioritize questions and allocate time accordingly*.

3. **Know Where to Find Information**: *Organize your notes, textbooks, and any other resources ahead of time. Having everything neatly arranged will help you quickly locate the information you need during the test*.

4. **Read and Understand Each Question**: *Open-book tests often require more critical thinking. Read each question carefully, and make sure you fully understand what's being asked before looking for an answer*.

5. **No Collaboration**: *An open-book test is meant to assess your individual understanding. Do not collaborate with others, as this can lead to academic dishonesty. Work independently and follow the guidelines set by your teacher*.

Answer all the questions in a a4 sheet:

1.*A well-known news channel broadcasts information on a wide range of topics, including politics, government, foreign affairs, sports and the latest movie and television news. Reporters are in charge of gathering, evaluating and transmitting information about current events. Furthermore, the news channel permits people to submit breaking news, which is subject to verification by the channel's reporters. However, it may be difficult to distinguish between real news and fake news, which can lead to confusion among readers and threaten a news organization's reputation. Which of the following domains is used to detect fake news so that the audience has a high level of trust in the news channel?*

A. Computer Vision
B. Natural Language Processing
C. Data Science
D. None of the above

2.Suppose you are going to build an Ai-based system in your company to predict profit outcomes in the next 5 years. Choose the stages of AI project cycle in the correct order.

A. Choosing the algorithm-> Evaluating the model->data cleaning->collecting data->4Ws canvas
B. 4Ws canvas-> collecting data->data cleaning->choosing the algorithm->Evaluating the model
C. 4Ws canvas ->data cleaning -> collecting data -> choosing the algorithm-> Evaluating the model
D. Data Cleaning-> 4Ws canvas-> choosing the algorithm-> collecting data-> evaluating the model

3."AI is not a well-defined technology and no universally agreed definition exists." This definition of AI is given by _____

A.NITI Aayog
B. World Economic Forum
C. European Artificial Intelligence
D. Encyclopedia Britannica

4.Efficiency of the model is calculated on the basis of which parameters.

A. F1 Score >> Recall >> Precision >> Accuracy
B. Accuracy >> Precision >> Recall >> F1 Score
C. Precision >> Accuracy >> F1 Score >> Recall
D. Recall >> Precision >> Accuracy >> F1 Score

5.Suppose we want to check how well our machine learning model learns and generalizes to the new data. While the performances of the machine learning algorithms indicate as follows, explain them each with appropriate graph.

1. High Bias,
2.Low Bias (Low Variance),
3. High Variance

6.What is TFIDF? Write its formula.

7. Give an example of the following:
        A. Multiple meanings of a word B. Perfect syntax, no meaning

8. Differentiate between a script-bot and a smart-bot

9. Explain various layers in CNN

10. Explain the "Data Processing" in NLP.