SET | A

**INDIAN SCHOOL MUSCAT**
**HALF YEARLY EXAMINATION 2023**
**ARTIFICIAL INTELLIGENCE (CODE 843)**

TIME ALLOTED : 2 HRS.

CLASS : XI
DATE: 20-09-2023

MAXIMUM MARKS: 50

## GENERAL INSTRUCTIONS:

1. Please read the instructions carefully.
2. This Question Paper consists of two sections: Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. SECTION A - 24 MARKS (1M x 24 = 24M)
5. SECTION B –26 MARKS (2M x 7 = 14M & 4M x 3 = 12M)

## SECTION A

1. **Answer any 5 out of the given 6 questions on Employability Skills (1 x 5 = 5 marks)**

   i. Name the ruler in LibreOffice that is used to set the left and right margins _____    1

   ii. Mention any two features of word processors which helps Meenu to create her document    1
   attractive and error free.

   iii. Name the bar present at the bottom of the Writer window that gives information about the    1
   number of pages in the document. _____

   iv. What is the difference between Save and Save As options of File menu?    1

   v. Write keyboard shortcut for the following commands:    1

         a. Spelling and grammar option _____

         b. Find _____

   vi. Name the four alignment options in Libre office document.    1

2. **Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**

   i. What is the contribution of Alan Turing to present day machine intelligence?    1

   ii. Define Machine Learning.    1

iii. _____ is the technology behind the Chatbots. 1

iv. A well-known news channel broadcasts information on a wide range of topics. They also 1 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. Matrices
   c. Natural Language Processing
   d. Data Science

v. The size of an image is represented as 900 x 700. What would be the type of the image? 1

   a. Grayscale image

   b. Jpeg Image

   c. Large image

   d. Colour Image

vi. Identify the source of AI bias in the following contest. 1

   Amazon developed an AI tool for recruitment, but the company realized its new system was not rating candidates for software developer jobs and other technical posts in a gender-neutral way.

3. **Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**

   i. Lata has a data set with images of different laptops and desktops. She has to train the 1 machine on how to classify all the different images. Mention any two labelled data she can use?

   ii. An AI model uses input only from the dynamic environment that does not include any 1 labelled data. It improves as it learns about the environment. As the learning agent interacts with the environment while moving from one state to another, it is rewarded for success but penalized for failure. Identify the learning model.

      a. Supervised Learning
      b. Unsupervised Learning
      c. Reinforcement Learning

d. All of the above

iii. Chatbot installed at a school reception area is an example of _____ type of Chatbot.  1

iv. Unscramble the letters and find which of the following CV task takes an image as an input  1
and outputs a class.
    a. jectob ectiondet
    b. manticse mensegtation
    c. ficationclassi & alizationloc
    d. stanince mentsegation

v. Which of the following option address the challenge of 'AI trust'.  1

    a. Minimize bias in training data

    b. Share the algorithm with the government

    c. International monitoring body to monitors AI ethic

    d. All of these

vi. The recently proposed bipartisan bill by the US lawmakers requires internet giants to _____.  1

4. **Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)**

i. PayPal is using ML for protection _____.  1

ii. Identify the category of data in Facebook post. Give Reason.  1

iii. _____ is a surveillance method in driverless car with which the distance to a target is  1
measured.

iv. You have been asked to design an AI application which will prepare the 'minutes of the  1
meeting'. Which part of AI will you use to develop your solution?

    a. Images

    b. Natural Language Processing

    c. Python Programming

    d. Computer Vision

v. _____ is defined as the discipline dealing with moral obligations and duties of humans.  1

vi. AI is basically data + _____ + training based on data + _____.  1

5. **Answer any 4 out of the given 5 questions (1 x 4 = 4 marks)**

   i.   Define ANN.      1

   ii.   1



      Identify A, B & C in ML approach.

   iii.   Which part/domain of AI is used in weather prediction    1

      a. Computer Vision

      b. Natural Language Processing (NLP)

      c. Chatbot

      d. None of these

   iv.   Write the full form of AMA.    1

   v.   The new AI jobs will    1

      a. Eliminate bureaucracy

      b. Improve the service to citizens

      c. require higher order thinking skills

      d. All of these

## SECTION B: SUBJECTIVE TYPE QUESTIONS

**Answer any 7 out of the given 8 questions (2 x 7 = 14 marks)**

6. Who is known as the father of AI? Define AI.    2

7. Define Cognitive Computing. Mention any one applications of it.    2

8. Management jobs cannot be replaced by artificial managers. Justify your answer.    2

9. What are the three types of datasets? Name the dataset that consists of a large assortment of images that can be used to make training dataset larger and more diverse.    2

10. Explain the social benefits of AI in Disaster Prediction.    2

11. Explain any two characteristics of AI    2
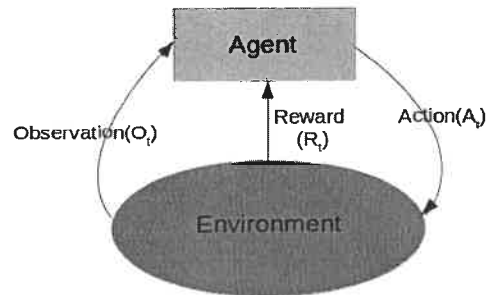
12. Define the following terms    2

      a. Robo ethics      b. Machine ethics

13. Write one challenge and one ethical consideration of AI in self-driving cars.    2

**Answer any 3 out of the given 4 questions (3 x 4 = 12 marks)**

14. Write any four differences between machine learning and deep learning.    4

15. Define the term channel in CV. Explain the channels present in colour images and grey images.    4

16. Explain different nodes in ANN with a neat diagram.    4

17. Identify the type of ML in the following diagram and explain it with an example.    4



**\*\*\*\*END OF THE QUESTION PAPER\*\*\*\***