

ATOMIC ENERGY CENTRAL SCHOOL-1, HYDERABAD
TERM-1 / PT-II EXAMINATION, 2025-26

Class: X
Subject: AI (Artificial Intelligence)

Duration: 2 hours
Max. Marks: 50

General Instructions:

1. This Question Paper consists of two sections: Section-A & Section-B
2. All questions of a particular section must be attempted in the correct order.

Section-A

1. Answer any 4 out of the given 6 questions: (1 X 4 = 4)

- i. Which of the following is the person who transmits the message?
(A) Receiver (B) Sender
(C) Medium (D) Communication Channel ()
- ii. Which of the following is an interpersonal barrier?
(A) Social anxiety (B) Poor self esteem
(C) Not willing to talk (D) All of these ()
- iii. Why does a Good Sleep plays an important role?
(A) Spend quality time with family (B) Rejuvenates body
(C) Motivates you (D) All of these ()
- iv. Which one of the following you should look for in every move you take in life?
(A) Positive Thought (B) Negative Thought
(C) Stress (D) Emotional imbalance ()
- v. Which of the following is called the physical part of a computer?
(A) Hardware (B) Software
(C) Shareware (D) None of these ()
- vi. Which of the following is the default location where the deleted files are stored?
(A) Network (B) Recycle Bin
(C) Computer (D) Desktop ()

2. Answer any 5 out of the given 6 questions: (1 X 5 = 5)

- i. What is the main goal of the data acquisition stage in AI project?
(A) To collect raw data for analysis and reference
(B) To visualize data using statistical methods
(C) To test the AI model
(D) To deploy the model into production ()

- ii. What is the primary focus during the modeling phase of the AI project cycle?
 (A) Collecting additional data
 (B) Testing the final model in real-world scenarios
 (C) Deploying the model for practical use
 (D) Selecting and evaluating the best algorithm to build the model ()
- iii. Which ethical framework emphasizes good character traits such as kindness and compassion?
 (A) Value-based ethical framework (B) Virtue-based ethical framework
 (C) Rights-based ethical framework (D) Utility-based ethical framework ()
- iv. What is the main goal of Computer Vision projects?
 (A) Translating audio data into visual descriptions
 (B) Converting digital data into analogue signals
 (C) Teaching machines to understand textual information
 (D) Converting digital visual data into computer-readable language ()
- v. _____ is used in agriculture for tasks like monitoring crops, detecting pests and estimating yields.
- vi. The types of data that can be used by NLP are text and video. (True / False)

3. Answer any 5 out of the given 6 questions: (1 X 5 = 5)

- i. Which of the following is labelled data?
 (A) Unmarked data (B) Marked or tagged data
 (C) Raw data (D) Unusable data ()
- ii. Which of the following types of datasets does unsupervised learning use?
 (A) Labelled dataset (B) Unlabelled dataset
 (C) Partially labelled dataset (D) Fixed rules dataset ()
- iii. What type of feedback does reinforcement learning use?
 (A) Labelled data feedback (B) Unlabelled data feedback
 (C) Reward and penalty feedback (D) No feedback ()
- iv. Identify the role of the input layer in a neural network.
 (A) Computation (B) Receive data
 (C) Predictions (D) Activation functions ()
- v. _____ models improve their performance using historical data.
- vi. Features in a dataset are represented by columns in a table. (True / False)

4. Answer any 5 out of the given 6 questions:

(1 X 5 = 5)

- i. Why is it essential to evaluate a machine learning model using evaluation techniques such as train-test split?
(A) To increase the complexity of the model
(B) To reduce the size of the training dataset
(C) To eliminate the need for testing data
(D) To assess how well the model performs on unseen data ()
- ii. Which of the following describes an overfitting scenario in model evaluation?
(A) The model performs poorly on both training and testing data
(B) The model performs well on both training and testing data
(C) The model performs well on training data but poorly on testing data
(D) The model performs poorly on testing data but well on training data ()
- iii. Which metric measures how many positive predictions made by the model are actually correct?
(A) Recall (B) Precision
(C) Accuracy (D) F1 Score ()
- iv. Which term refers to the actual value being positive, but the model predicting it as negative?
(A) True Positive (B) False Positive
(C) False Negative (D) True negative ()
- v. In the case of a model predicting credit card fraud, the model may use the confusion matrix to measure Precision, Recall, Accuracy and _____.
- vi. Accuracy refers to the percentage of incorrect predictions made by the model. (True / False)

5. Answer any 5 out of the given 6 questions:

(1 X 5 = 5)

- i. Which of the following is NOT a real-time application of NLP?
(A) Image recognition (B) Chatbots
(C) Plagiarism checker (D) Sentiment analysis ()
- ii. An AI agent playing a game and learning from its rewards and penalties is an example of
(A) Supervised Learning (B) Unsupervised Learning
(C) Reinforcement Learning (D) Evolutionary Learning ()
- iii. _____ is a crucial step that involves analyzing large volumes of data to uncover meaningful patterns, trends and relationships.
- iv. _____ are primarily used for solving problems with large datasets like images.
- v. Ethical frameworks are important to ensure AI development matches the goals of the development of human beings. (True / False)
- vi. Artificial Neural Networks (ANNs) are inspired by the structure and function of neurons in the human brain. (True / False)

Section-B

Answer any 3 out of the given 5 questions:

(2 X 3 = 6)

6. Write any 2 important points to keep in mind related to body language for a positive impact in a School Appointment Interview.
7. Explain any 2 characteristics of a good feedback.
8. Name the 4 steps of building self-motivation.
9. Write any 4 advantages of working independently.
10. Write any 2 precautions will you take to protect your computer from computer viruses.

Answer any 4 out of the given 6 questions:

(2 X 4 = 8)

11. Explain the terms: **i)** AI Project Cycle **ii)** Value-based ethical frameworks
12. Explain the terms: **i)** Bioethics **ii)** Problem Statement Template
13. Explain any 2 applications of Statistical Data.
14. Define the terms: **i)** Digit Recognition **ii)** AI Modelling
15. Define the terms: **i)** Training Dataset **ii)** Testing Dataset
16. Explain any 2 evaluation models.

Answer any 3 out of the given 5 questions:

(4 X 3 = 12)

17. Explain any 4 points of the need of ethical frameworks for AI?
18. Explain the principles of Bioethics.
19. Differentiate between Machine Learning Deep Learning with respect to the following parameters:
i) Data dependency **ii)** Hardware dependency
iii) Problem solving approach **iv)** Execution time
20. **i)** Explain the term Clustering with an example.
ii) Explain the term Unsupervised Learning Approach with an example.
21. Discuss any 4 ethical concerns around model evaluation.

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