



B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL

PERIODIC TEST 1 2026-2027 ARTIFICIAL INTELLIGENCE (417) Set-01

Class: X

Date:

Admission No.

Time : 1 hr. 30 mins

Max Marks: 25

Roll No. :

General Instructions:

1. Please read the instructions carefully.
2. This Question Paper contain two sections: Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. All questions of a particular section must be attempted in the correct order.
5. **SECTION A - OBJECTIVE TYPE QUESTIONS (07 MARKS):**
 - i. This section has 01 question.
 - ii. Marks allotted are mentioned against question/part.
 - iii. There is no negative marking.
 - iv. Do as per the instructions given.
6. **SECTION B – SUBJECTIVE TYPE QUESTIONS (18 MARKS):**
 - i. This section has 12 questions.
 - ii. A candidate has to do 8 questions.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.

SECTION A: OBJECTIVE TYPE QUESTIONS

Q.(1) Answer any 7 out of the given 10 questions :

(7 x 1 = 7)

- (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 visualise 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 modelling 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 of the following is NOT an application of computer vision?
 - a. Categorising photos in a smartphone
 - b. Identifying faces in CCTV footage
 - c. Playing music based on mood
 - d. Enabling self-driving cars
- (iv) What do frameworks provide in the context of problem-solving?
 - a. Random solutions
 - b. Step-by-step guidance
 - c. Legal advice
 - d. Ethical justifications

- (v) Which of the following uses unsupervised learning?
- A chatbot answering FAQs using predefined rules.
 - A model predicting exam scores based on past performance.
 - Grouping photos in a gallery into "vacation", "family", and "pets" categories.
 - A weather prediction system using historical data.
- (vi) What type of feedback does reinforcement learning use?
- Labelled data feedback
 - Unlabelled data feedback
 - Reward and penalty feedback
 - No feedback
- (vii) Identify the role of the input layer in a neural network.
- Computation
 - Receive data
 - Predictions
 - Activation functions
- (viii) An AI agent playing a game and learning from its rewards and penalties is an example of:
- Supervised Learning
 - Unsupervised Learning
 - Reinforcement Learning
 - Evolutionary Learning
- (ix) Which of these are examples of positive feedback?
- Good work
 - You can draw better
 - Some points are missing
 - You need to work with dedication
- (x) Which of the following is an interpersonal barrier?
- Social anxiety
 - Not willing to talk
 - Poor self-esteem
 - All of these

SECTION B: SUBJECTIVE TYPE QUESTIONS

Answer any 6 out of the given 10 questions:

(6 x 2 = 12)

- Q. (2) Explain any two application of NLP.
- Q. (3) Write and explain any two issues related to AI.
- Q. (4) What is Right-based ethical framework?
- Q. (5) What is Data Acquisition?
- Q. (6) Define Deep Learning?
- Q. (7) What do you mean by a testing data set?
- Q. (8) Define Convolutional Neural Network.
- Q. (9) What is Clustering?
- Q. (10) What is non-verbal communication?
- Q. (11) Write any two don'ts of body language.

Answer any 2 out of the given 4 questions:

(2 x 3 = 6)

- Q.(10)** What is the need of ethical frameworks for AI?
- Q.(11)** GreenGro Technologies, a company specialising in sustainable farming solutions, is launching a smart market initiative to connect local farmers with buyers in urban areas. They plan to set up unmanned kiosks where buyers can purchase fresh produce directly. To ensure the security of the kiosks and prevent theft, they need a system that can monitor buyer activity and alert authorities in case of any suspicious behaviour. The company has access to security cameras installed at the kiosks and wants to use this data to create an AI-powered monitoring system for real-time surveillance. Create a 4W Project Canvas for GreenGro Technologies to outline the development of the AI-powered monitoring system.
- Q.(12)** Differentiate between Supervised and unsupervised learning.
- Q.(13)** Explain any two examples of Regression Model.

***** ALL THE BEST *****