



B.K. BIRLA CENTRE FOR EDUCATION

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



PERIODIC TEST I 2026-27

ARTIFICIAL INTELLIGENCE – SET – 1 MARKING SCHEME/ ANSWER KEY

Class : VIII

Date :

Admission No.:

Duration : 1 Hrs

Max. Marks : 25

Roll No.:

SECTION – A

Q1. Fill in the blanks (6x1 = 6) **A.** A project is defined as a **unique** (or planned) effort that is temporary and has a specific goal. **B.** The AI Project Cycle is an **iterative** process, meaning you may need to go back and repeat earlier steps. **C.** The first phase of the AI Project Cycle is called **Problem Scoping**. **D.** The specific outcome or result of a project is called a **deliverable** (or goal). **E.** In coffee production, the four major steps are Harvesting, Processing, **Roasting**, and Packaging. **F.** The tool used in Problem Scoping to identify Who, What, Where, and Why is called the **4Ws Problem Canvas**.

Q2. Choose the correct answer from the given options (5x1 = 5) **A.** Which of the following is a key characteristic of a project? **Answer: b) It is temporary and has a specific goal**

B. Which stage of the AI Project Cycle is the most time-consuming? **Answer: c) Data Acquisition** (Note: Finding and collecting the right data often takes the most time in real-world AI projects).

C. What type of data consists of words, letters, and numbers that you can read? **Answer: c) Text Data**

D. A project is a unique effort – no two projects are exactly the same. This statement is: **Answer: a) True**

E. Data Acquisition is the stage in the AI Project Cycle where the trained model is deployed for end-users. This statement is: **Answer: b) false** (This happens in the Deployment phase).

SECTION – B: Short Answer Questions

Q3. What is a Project? Write any two key characteristics of a project. (2 Marks)

Answer: A project is a planned set of tasks or activities that are done to achieve a specific goal within a set timeframe. *Key characteristics (Any two):*

1. It is temporary (it has a clear beginning and end).
2. It is unique (no two projects are exactly the same).
3. It has specific goals or outcomes (deliverables).

Q4. Explain data exploration stage in your own words. (2 Marks) Answer:

Data Exploration is the stage where we look closely at the data we have collected to understand it better. It involves organizing the data, checking for errors or missing information, and creating graphs or charts (data visualization) to find patterns and trends.

Q5. What is Problem Scoping? Why is it important for an AI project? (2 Marks)

Answer: Problem Scoping is the first step of the AI Project Cycle where we identify and clearly define the exact problem we want to solve using AI. It is important because it keeps the project focused on the right path and ensures the final AI model actually solves a real, helpful issue.

Q6. What is Data Acquisition? Give two examples of primary sources of data. (2 Marks)

Answer: Data Acquisition is the process of collecting the right information (data) from various sources to train our AI model. *Examples of primary sources (Any two):*

1. Conducting surveys or online questionnaires.
2. Collecting real-time information using sensors (like a camera, thermometer, or microphone).
3. Personal interviews.

SECTION – C: Long Answer Questions

Q7. Explain any three phases of the Project Life Cycle in your own words. (3 Marks)

Answer: *(Students can explain any 3 of the AI Project Cycle phases. Example below):*

1. **Problem Scoping:** This is the starting phase where we figure out what the actual problem is, who is facing it, and whether an AI solution can help.
2. **Data Acquisition:** In this phase, we gather all the necessary data (like images, text, or numbers) that the computer needs to learn about the problem.
3. **Modelling:** This is the phase where the AI actually learns from the collected data using different algorithms to create a system that can make predictions or smart decisions.

Q8. Explain the 4Ws Problem Canvas with the help of an example. What does each 'W' identify? (3 Marks) Answer: The 4Ws Problem Canvas is a framework used to define a problem clearly before trying to solve it. *What each 'W' identifies:*

- **Who:** Identifies the people facing the problem (the stakeholders).
- **What:** Identifies the exact nature of the problem and how we know it is a problem.
- **Where:** Identifies the situation or location where the problem occurs.

- **Why:** Identifies why solving this problem is important and how the solution will help.

Example (Students can use any valid example): Problem: "Students forgetting to bring their library books on time."

- **Who:** Students and the school librarian.
- **What:** Books are being returned late or lost.
- **Where:** In the school library.
- **Why:** Solving this will save students from paying late fees and ensure books are available for others to read.