



B.K. BIRLA CENTRE FOR EDUCATION

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

Term – I Examination: 2026-27 Artificial Intelligence – Set II

Class: VIII

Time: 2 hr.

Date: 12-09-2026

Max Marks: 50

General Instructions:

The Question Paper is divided into three sections Section A to D.

- Section A has 25 questions, out of which 21 has to attempt and carries 1 mark each.
- Section B has 10 questions, out of which 6 has to attempt and carries 2 marks each.
- Section C has 7 question, out of which 3 has to attempt and carries 3 marks each.
- Section D has 3 questions, out of which 2 has to attempt and carries 4 marks.

Section A – Objective Type Questions

Q1. Choose and write the correct answer. Answer any eleven questions. [11 X 1 = 11]

1. Which stage of the AI Project Cycle helps identify the problem, stakeholders and the purpose of solving it?
a) Evaluation b) Problem Scoping c) Modelling d) Data Exploration
2. Which stage involves collecting relevant data from suitable sources?
a) Data Acquisition b) Evaluation c) Deployment d) Problem Scoping
3. The first phase of an AI Project cycle, _____, involves clearly defining the problem you want to solve with AI.
a) Data Acquisition b) Evaluation c) Deployment d) Problem Scoping
4. What does the 'Who?' in the 4Ws Problem Canvas mainly help us identify?
a) The programming language b) The people affected by the problem
c) The model accuracy d) The storage device
5. Which stage helps us find patterns, trends and unusual values in a dataset?
a) Problem Scoping b) Data Exploration c) Modelling d) Evaluation
6. A value that is very different from the other values in a dataset is called a:
a) Pattern b) Label c) Outlier d) Feature
7. Which approach mainly uses predefined IF–THEN rules?
a) Learning-based approach b) Rule-based approach
c) Reinforcement approach d) Unsupervised approach
8. Which stage checks how well an AI model performs?
a) Data Acquisition b) Problem Scoping c) Evaluation d) Data Exploration
9. Which of the following is an important principle of ethical AI?
a) Fairness b) Hiding all decisions c) Ignoring privacy d) Increasing bias

10. AI Bias may occur when:
- Data is balanced and representative
 - An AI system unfairly favours a person or group
 - A model is evaluated carefully
 - Data is collected responsibly
11. Which of the following is an example of primary data?
- Data collected through a survey conducted by the project team
 - A published government report
 - An old newspaper article
 - A website article
12. Who coined the term 'Machine Learning'?
- Arthur Samuel
 - John McCarthy
 - Alan Turing
 - Bill Gates
13. Which type of Machine Learning learns from labelled examples?
- Unsupervised Learning
 - Reinforcement Learning
 - Supervised Learning
 - Rule-based Learning
14. Which type of Machine Learning uses rewards and penalties as feedback?
- Supervised Learning
 - Unsupervised Learning
 - Reinforcement Learning
 - Rule-based Learning
15. What does Ethics serve us in daily life?
- Legal framework
 - Moral compass
 - Social Hierarchy
 - Religious Doctrine

Q2. True or False

[5 X 1 = 5]

- The 4Ws Problem Canvas is used during Problem Scoping.
- Data Acquisition means collecting data required for an AI project.
- An outlier is a data value that is significantly different from the rest of the dataset.
- Ethical AI should give importance to human well-being.
- Reinforcement Learning is trained only with labelled input-output pairs.

Q3. Assertion and Reasoning

[5 X 1 = 5]

Directions: Choose the correct option from the following:

- (a)** Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).
- (b)** Both Assertion (A) and Reason (R) are true, but Reason (R) is NOT the correct explanation of Assertion (A).
- (c)** Assertion (A) is true, but Reason (R) is false.
- (d)** Both Assertion (A) and Reason (R) are false.

- Assertion (A):** Data Acquisition is an important stage of an AI project.

Reason (R): Reason (R): An AI model requires relevant data to learn patterns and produce useful results.

2. **Assertion (A):** An outlier should always be removed from a dataset.
Reason (R): Every unusual data value is necessarily an error.
3. **Assertion (A):** AI systems should be human-centric.
Reason (R): Ethical AI should consider human well-being, safety and fairness.
4. **Assertion (A):** Supervised Learning uses labelled data for training.
Reason (R): The model learns by comparing its predictions with known or expected outputs.
5. **Assertion (A):** Evaluation is performed only before an AI model is built.
Reason (R): Evaluation is used to check the performance and reliability of an AI model.

Section B – Short Answer Questions

Q4. Write the following questions answer in 3-4 sentences. Write any six answers. [6 X 2 = 12]

1. State any four properties that a project has.
2. What is meant by a deliverable in a project? Give one example.
3. Why should data be collected from reliable sources during Data Acquisition?
4. What is Data Exploration? Why is it useful in an AI project?
5. Differentiate between primary and secondary data.
6. Explain the Evaluation stage of the AI Project Cycle.
7. What is AI Bias? Give one simple example.
8. Write any three ways in which AI can affect our daily life negatively.
9. What is Reinforcement Learning? How does feedback help in this type of learning?

Section C – Long Answer Questions

Q5. Answer any three from the following questions in 5-6 sentences. [3 X 3 = 9]

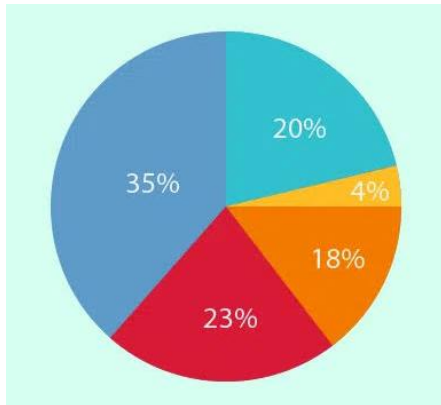
1. Explain any three stages of the AI Project Cycle with suitable examples.
2. Why are the quality and quantity of data considered crucial for the success of an AI model?
3. Differentiate between Rule-based and Learning-based approaches to AI Modelling.
4. What is AI Ethics? Explain any three principles that should be considered while developing an AI solution.
5. Explain how AI Bias can affect the decisions made by an AI system. Suggest ways to reduce bias.
6. Explain the types of Machine Learning. Explain in the terms of How it Works?
7. Write and explain any three applications of Machine Learning in our daily life.

Section D – Application Based/Picture Based Questions

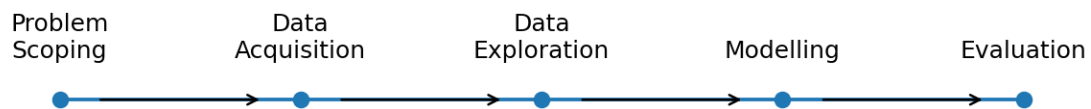
Q6. Do as directed. Attempt any two complete question.

[2 X 4 = 8]

1. Explain how Aeroponics Plant Growth Project represents a "Project Cycle," and describe its four sequential steps using the concept of AI Project Cycle concept.
2. Identify the following diagram explain when this type of diagram is utilised in which phase of AI Project Cycle in 5-6 sentences?



3. Identify the following image and explain it's steps in 7-8 sentences:

[illegible]