



Name:

Grade: X Sec:

Date:

Subject: Artificial Intelligence

Topic: Worksheet

Section A

1. Which of the following is the correct sequence of the AI Project Cycle stages?

- a) Ideation → Data Exploration → Data Modelling → Data Acquisition → Evaluation → Deployment
- b) Problem Scoping → Data Acquisition → Data Exploration → Modelling → Evaluation → Deployment
- c) Data Acquisition → Problem Scoping → Data Exploration → Modelling → Evaluation → Deployment
- d) Deployment → Evaluation → Problem Scoping → Modelling → Data Exploration → Data Acquisition

Answer: b

2. The first stage of the AI Project Cycle is:

- a) Data Acquisition b) Problem Scoping c) Modelling d) Deployment

Answer: b

3. In the Evaluation stage of the AI Project Cycle, the main purpose is to:

- a) Gather and collect raw data b) Check whether the model meets the business goal
- c) Deploy the model for real-world usage d) Define the problem clearly

Answer: b

4. Which stage of the AI Project Cycle deals with identifying relevant data sources and collecting data?

- a) Problem Scoping b) Data Acquisition c) Modelling d) Deployment

Answer: b

5. Which of the following is NOT a domain of AI?

- a) Natural Language Processing b) Computer Vision c) Robotics d) Database Management

Answer: d

6. Chatbots like Alexa and Siri are applications of which AI domain?

- a) Computer Vision b) Natural Language Processing c) Robotics d) Expert Systems

Answer: b

7. Self-driving cars primarily use which AI domain?

- a) NLP b) Computer Vision c) Expert Systems d) Speech Recognition

Answer: b



Name: _____ Grade: X Sec: _____ Date: _____

Subject: Artificial Intelligence Topic: Worksheet

8. Which AI domain focuses on making machines understand and generate human language?

- a) Robotics b) Natural Language Processing c) Computer Vision d) Neural Networks

Answer: b

9. The need for ethical frameworks in AI arises because:

- a) AI is cost-effective b) AI can make decisions affecting humans
c) AI always produces perfect results d) AI does not require human supervision

Answer: b

10. Which of the following is NOT a factor influencing our decision-making?

- a) Emotions b) Peer Pressure c) Logical Reasoning d) Computer Hardware

Answer: d

11. Which of the following is a rights-based ethical framework?

- a) Focuses on maximizing happiness b) Focuses on duties and human rights
c) Focuses on results only d) Focuses on cost-effectiveness

Answer: b

12. Bioethics deals with:

- a) Ethics in medicine and biology b) Business ethics
c) Legal rights only d) Data storage

Answer: a

13. Which is NOT a principle of bioethics?

- a) Respect for autonomy b) Beneficence c) Justice d) Profit Maximization

Answer: d

14. The use case of bioethics in AI is most related to:

- a) AI in medical diagnosis and treatment b) AI in online shopping
c) AI in gaming d) AI in weather forecasting

Answer: a

Section B: HOTS (Case-based MCQs)

Case 1: AI in Healthcare

A hospital develops an AI model to predict diabetes. The model shows bias against older patients, predicting them at higher risk even with normal sugar levels.



Name: _____ Grade: X Sec: _____ Date: _____

Subject: Artificial Intelligence Topic: Worksheet

15. In the AI Project Cycle, which stage should the hospital revisit to correct the bias?

- a) Deployment b) Problem Scoping c) Data Acquisition & Exploration d) Modelling

Answer: c

16. Which ethical principle of bioethics is being violated here?

- a) Justice b) Beneficence c) Autonomy d) Non-maleficence

Answer: a

Case 2: AI in Education

An EdTech company's AI essay grader gives higher scores to essays in English but lower to essays in regional languages.

17. Which AI domain is primarily used in this project?

- a) Computer Vision b) Natural Language Processing c) Robotics d) Statistical Data

Answer: b

18. The ethical concern in this case highlights the need for:

- a) More deployment stages b) Ethical frameworks to prevent language bias
c) Better computer hardware d) Replacing AI with manual grading

Answer: b

Case 3: AI in Environment

A city uses AI to predict pollution levels, but predictions are late due to poor data from sensors.

19. Which stage of the AI Project Cycle needs improvement?

- a) Evaluation b) Data Acquisition c) Modelling d) Deployment

Answer: b

20. Applying the utility-based ethical framework, what should the government prioritize?

- a) Ensuring maximum benefit for all citizens by improving sensor data collection
b) Protecting only the rights of certain communities
c) Prioritizing cost-cutting over accuracy
d) Limiting data use to one locality only

Answer: a



Name: _____ Grade: X Sec: _____ Date: _____

Subject: Artificial Intelligence Topic: Worksheet

Case 4: AI in Job Recruitment

A company's AI resume screener rejects many women applicants for technical roles due to biased training data.

21. Which factor influenced the wrong decision-making of AI?

- a) Human values b) Biased training data c) Lack of computer hardware d) Random errors

Answer: b

22. To avoid such issues in the future, the company should adopt which ethical framework?

- a) Rights-based framework b) Virtue-based framework
c) Utility-based framework d) Only sector-based framework

Answer: a

Section C: Assertion & Reasoning Questions

(Choose the correct option:)

- A) Both Assertion (A) and Reason (R) are true, and (R) is the correct explanation of (A).
B) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
C) (A) is true, but (R) is false.
D) (A) is false, but (R) is true.

Q23.

Assertion (A): The AI Project Cycle begins with Problem Scoping.

Reason (R): Without clearly defining the problem, the AI solution may not meet its objective.

Answer: A

Q24.

Assertion (A): Data Acquisition is the last stage of the AI Project Cycle.

Reason (R): Data Acquisition involves collecting data from various sources.

Answer: C

Q25.

Assertion (A): Computer Vision allows machines to interpret and understand images and videos.

Reason (R): NLP helps in teaching machines to analyze visual data.

Answer: C



Name:

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PRESIDENCY SCHOOL

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Q26.

Assertion (A): Ethical frameworks are required in AI to prevent unintended harm.

Reason (R): Ethical frameworks provide structured guidance for making morally acceptable choices.

Answer: A

Q27.

Assertion (A): Rights-based frameworks focus on maximizing happiness for the greatest number.

Reason (R): Rights-based frameworks prioritize the protection of human dignity and individual autonomy.

Answer: D

Q28.

Assertion (A): Bioethics is a sector-based framework used in healthcare.

Reason (R): Its principles include autonomy, beneficence, non-maleficence, and justice.

Answer: A

Q29.

Assertion (A): Bias in AI models can result from the training data used.

Reason (R): If training data contains prejudice, the AI system may learn and replicate the same.

Answer: A

Q30.

Assertion (A): Evaluation in AI Project Cycle is done before Modelling.

Reason (R): Evaluation helps in improving the model after testing it with new data.

Answer: C
