



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 – 2 MARKING SCHEME/ ANSWER KEY

Class : VII

Date :

Admission No.:

Duration : 1 Hrs

Max. Marks : 25

Roll No.:

SECTION – A

Q1. Choose the correct answer from the given options (6x1 = 6) A. What is the main goal of Natural Language Processing? **Answer: b) To enable computers to understand and use human language**

B. Siri, Alexa, and Google Assistant are examples of: **Answer: b) Smart Assistants**

C. Which of the following best describes Sentiment Analysis? **Answer: b) Identifying and classifying emotions in text (positive, negative, neutral)**

D. Data that has predefined types and formats, and is highly organised, is called: **Answer: c) Structured Data**

E. Which tool is used to check for grammar errors and improve writing using NLP? **Answer: c) Grammarly**

F. A bar chart is best used to: **Answer: b) Compare different categories using rectangular bars**

Q2. Fill in the blanks (5x1 = 5) A. A **Chatbot** is a computer program that simulates a conversation with a user using natural language. B. Smart-bots are flexible and powerful because they learn with more **data** (or interactions/training). C. **Passive** Data footprints are collected automatically through browsing history, IP address, and device information. D. **Data** (or Data Science) is the first domain of AI. (*Note: In standard AI curriculum, the three domains are Data, Computer Vision, and NLP*). E. Computers understand the language of **binary** (or 0s and 1s).

SECTION – B: Short Answer Questions

Q3. What is data? Mention any two types of data. (2 Marks) **Answer:** Data refers to raw, unorganized facts, numbers, words, or pictures that are collected together for reference or analysis. *Types of data (Any two):* Structured Data, Unstructured Data, Text Data, Image Data, Audio Data.

Q4. What is the difference between a Script-bot and a Smart-bot? (Give two points each) (2 Marks) **Answer: Script-bot:**

1. Follows pre-programmed rules and a strict script.
2. Cannot learn from past conversations and only answers specific, preset questions.

Smart-bot:

3. Uses Artificial Intelligence to understand natural language.
4. Learns from past conversations and can handle complex, unpredictable questions.

Q5. What do you mean by digital footprints? Name its types. (2 Marks) **Answer:** A digital footprint is the trail of data or information you leave behind when you use the internet (such as websites visited, emails sent, or social media posts). *Types:*

1. Active Digital Footprint
2. Passive Digital Footprint

Q6. What is Sentiment Analysis? Give one real-world example of how it is used. (2 Marks) **Answer:** Sentiment Analysis is a technique used by AI to identify and categorize the underlying emotion or tone in a piece of text as positive, negative, or neutral. *Example (Any one):*

- Analyzing customer reviews on Amazon to see if people like or dislike a product.
 - Checking comments on a YouTube video to see if the audience's reaction is happy or angry.
-

SECTION – C: Long Answer Questions

Q7. Explain how NLP works in three simple steps. Also name any two applications of NLP. (3 Marks) **Answer:** *How NLP works:*

1. **Input:** The computer receives data in the form of human language (either typed text or spoken words).
2. **Processing:** The computer breaks down the sentences into smaller parts, removes unnecessary words, and uses AI to understand the meaning and context.
3. **Output:** The computer generates a response or takes an action based on what it understood. *Applications (Any two):* Voice Assistants (Alexa/Siri), Google Translate, Grammarly, Chatbots, Spam Filters.

Q8. Explain any 3 uses of statistical data in real life with examples. (3 Marks) **Answer:**

1. **Weather Forecasting:** Meteorologists collect and analyze past statistical data related to temperature, wind, and humidity to accurately predict whether it will rain or be sunny tomorrow.

2. **Sports:** Teams use statistical data (like a cricket player's batting average or strike rate) to analyze player performance and decide who should be selected for the next match.
3. **Education and Schools:** Teachers use statistical data (like the average marks of a class in a recent test) to figure out which topics the students understood well and which subjects need to be revised.