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: VII **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 26 questions, out of which 22 has to attempt and carries 1 mark each.
- Section B has 11 questions, out of which 6 has to attempt and carries 2 marks each.
- Section C has 8 question, out of which 4 has to attempt and carries 3 marks each.
- Section D has 3 questions, out of which 1 has to attempt that carries 4 marks.

Section A – Objective Type Questions

Q1. Choose and write the correct answer. Answer any ten questions. **[10 X 1 = 10]**

1. In a system map, what are "Attributes"?
   a) The cycles where the output of one component becomes the input of another
   b) The lines showing the direction of flow or influence between parts
   c) The characteristics or properties of the system components
   d) The factors outside the system boundary that influence its behaviour

2. In a system map, what do "boxes or circles" typically represent?
   a) Relationships b) Boundaries
   c) Elements or components of the system d) Feedback loops

3. What is the role of NLP in "Video Subtitles and Captioning"?
   (a) It solely handles the audio recognition of speech.
   (b) It is only responsible for placing the subtitles at the top of the screen.
   (c) It figures out the words, sentence structure, and timing to put the correct words on the screen.
   (d) It only translates the spoken words into a single, fixed language.

4. Which type of chatbot is characterized by being "easy to make," working "around a script which is programmed in them," and having "limited functionality"?
   (a) Script bot (b) Smart-bot (c) AI Helper (d) Predictive-bot

5. What is the primary function of Sentiment Analysis**?**
   (a) To convert spoken language into written text.
   (b) To check for grammatical correctness in written documents.
   (c) To identify and classify emotions (positive, negative, and neutral) within text data.
   (d) To automatically translate text between different human languages.

6. What is the definition of data?
   a) Processed and organized facts that provide knowledge.
   b) A representation of facts or instructions

c) Insights derived from analysis.
d) Only numbers and words.

7. What are data footprints?
   a) The physical tracks left by people in the real world.
   b) The marks left on paper after printing data.
   c) The size of data storage on a device.
   d) The traces left by an individual or organization's online activities and interactions.

8. "Confidentiality" in AI ethics ensures that:
   a) All identifying information is kept secret from everyone except the authorized program coordinator. b) No one, including the developer, can see the data.
   c) Data is sold to the highest bidder.
   d) The AI's source code is hidden from the public.

9. What is the best definition of "Ethics"?
   a) A set of government laws that must be followed.
   b) Rules or principles that guide us in knowing right from wrong.
   c) A way to ensure computers work faster.
   d) The process of making money from technology.

10. Who is responsible for implementing the Sustainable Development Goals (SDGs)?
    a) Only governments and international organizations.
    b) Exclusively the private sector.
    c) Primarily civil society groups.
    d) Governments, the private sector, civil society, and individuals.

11. What is the fundamental meaning of "Sustainability"?
    a) The ability to consume all resources without concern.
    b) Focusing solely on immediate human needs.
    c) Using natural resources responsibly in a way that doesn't harm the Earth for future generations.
    d) Maximizing economic growth at any cost.

12. Which of the following best describes renewable resources?
    a) Resources that took millions of years to form.
    b) Resources that can be replenished naturally over a relatively short period of time.
    c) Resources that exist in a finite amount.
    d) Resources that cannot be replaced once they are gone.

13. Which generation of robots is also known as "Sensored Control Robots" and operates as a closed-loop system?
    a) First generation b) Second generation
    c) Third generation d) Fourth generation

14. The word "robot" made its first appearance in Karel Capek's 1920 play R.U.R. and is derived from a Czech word meaning:
    a) Metal worker b) Forced labor
    c) Mechanical helper d) Electronic mind

Q2. True or False **[6 X 1 = 6]**

1. Smart Chatbots uses NLP to understand and respond like a real person.
2. Khan Academy and Byju are gaming apps.
3. Passive data footprints are collected automatically without the user's intentional participation, such as IP addresses or browsing history.
4. AI systems do not have their own moral compass hence they can easily develop "blind spots" if their training data is incomplete or unbalanced.
5. Unimate the robot worked in a Tesla company and provided a facility to lift and stack metal parts
6. Linear thinking breaks the system into an isolated parts to solve the problems.

Q3. Assertion and Reasoning **[6 X 1 = 6]**

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.

i. **Assertion (A):** Individuals have no significant role in achieving the Sustainable Development Goals; only governments and large organizations are responsible.
Reason (R): Small actions like saving water and recycling are identified as ways individuals can help with the SDGs.

ii. **Assertion** (A): Script Bots work around a script which is programmed.
Reason (R): Smart bots work on bigger databases and other resources directly.

iii. **Assertion (A):** Using a fitness band to track your heart rate is an application of data in daily life.
Reason (R): Predictive analytics uses historical data to identify potential health risks before they become serious.

iv. **Assertion (A):** In a system map, "arrowhead lines" are primarily used to indicate the physical distance between different elements.
Reason (R): These lines actually represent the relationships and the direction of flow or influence between the system's components.

v. **Assertion (A):** Sophia is capable of facial recognition and verbal communication.
Reason (R): Sophia was created by Hanson Robotics and was the first robot to be granted citizenship

vi. **Assertion (A):** Many facial recognition systems are less accurate at identifying people with darker skin.
Reason (R): AI systems are naturally better at recognizing lighter colors because computer sensors are not capable of seeing darker shades.

Section B – Short Answer Questions

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

1. What is the use of data related to predictive analytics?
2. How NLP works in Smart Assistants.
3. What is Data? What are there <u>three</u> different categories?
4. What is Chatbot? Give any two examples of the same.
5. What is Human Blind Spot? Explain with an example.
6. What is AI Bias?
7. What is Goal for People in SDG mean?
8. What is the importance of Natural Resources?
9. Define the term 'Interconnectedness' in a System Map.
10. Why System Thinking is important than Liner Thinking?
11. Define robotics.

Section C – Long Answer Questions

Q5. Answer any <u>four</u> from the following questions in 5-6 sentences. [4 X 3 = 12]

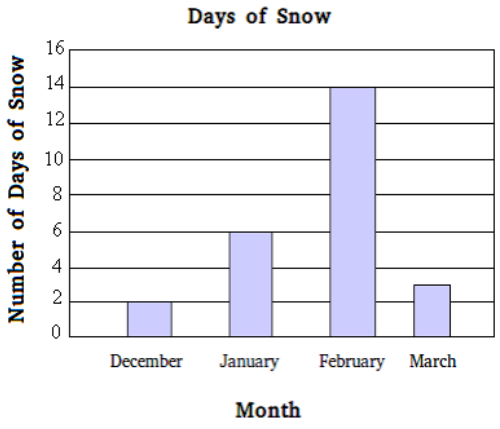
1. What are the features of System Maps?
2. Mention and explain three laws of robotics.
3. Differentiate between Second and Fourth Generation of Robots.
4. Write a brief not on 'Sustainability'.
5. Differentiate between Renewable and Non-Renewable natural resources (2 points each with example).
6. Write any three Ethical consideration while using statistical data.
7. Explain three types of AI Domain.

Section D – Application Based/Picture Based Questions

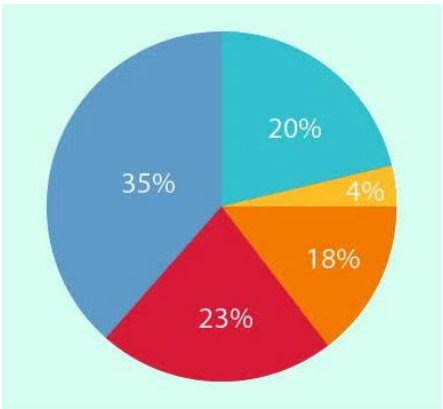
Q6. Do as directed. Attempt any <u>one</u> complete question. [1 X 4 = 4]

1. Identify the type of data visualization and explain them:

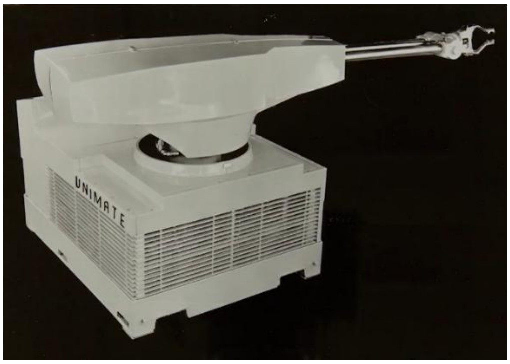
a.



b.

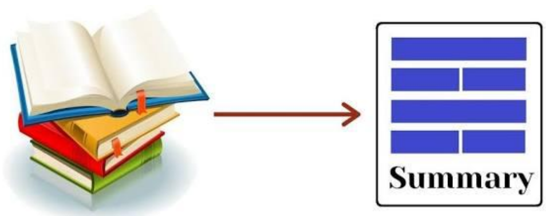


2. Identify the following robot. Write their generation and specifications:

a. 

b. 

3. Identify the following image and explain how NLP works in it?

a. 

b.