



B. K. BIRLA CENTRE FOR EDUCATION, PUNE

(SENIOR SECONDARY CO-ED DAY CUM RESIDENTIAL SCHOOL, AFFILIATED TO CBSE NEW DELHI)

ANNUAL EXAMINATION (2024-25)

ARTIFICIAL INTELLIGENCE



Class : V

Date :17-03-2025

MARKING SCHEME

Duration : 2 Hours

Max. Marks : 50

Note: Read the questions carefully and answer according to the instructions given.

1. Multiple Choice Questions.(Answer any 5 of 6):

5 x 1 = 5 Marks

- i. The most common video format is
 - a. MP3
 - b. RealAudio
 - c. **Flash**
- ii. There arebasic elements of multimedia.
 - a. Three
 - b. Four
 - c. **Five**
- iii. The software requirements of multimedia may include.....
 - a. Windows Media player
 - b. VLC player
 - c. **Both a and b**
- iv.is a visual representation of something.
 - a. **Image**
 - b. Text
 - c. Audio
- v.is a collection of audio digital files which can be downloaded or listening through the internet.
 - a. Graphics
 - b. Multimedia
 - c. **Podcast**
- vi. The components of media such as text, pictures, sounds etc used together to present the information is called.....
 - a. **Multimedia**
 - b. Graphics
 - c. Podcast

2. Fill in the blanks with the help of words given in the box. .(Answer any 5 of 6): 5 x 1 = 5 Marks

ISP Signature Video Conferencing Internet Internal Modem Chatting

- i. ... **Signature** is inserted at the bottom of each mail we send.
- ii. ... **Internet** ...is the network of internet connected computer across the world.
- iii. **Chatting** ...allows us to communicate with others in real time.
- iv. **Internal Modem**.is already installed in your computer.
- v. Using telephone line computer is connected to... **ISP**.
- vi. Using... **Video Conferencing**...we can see the distant person while we talking to him.

3. Write 'T' for true and 'F' for false statement.(Answer any 5 of 6):

5 x 1 = 5 Marks

- i. A sound block contains 9 purple coded color blocks. T
- ii. We cannot delete the default sprite and add a new sprite. F
- iii. Scratch provides various in-built sprites from which we can choose and add it on stage. T

- iv. The value of a variable can be in the form of number or text. T
- v. We can also record our own sound but cannot add in script. F
- vi. The color code of sensing block is blue. T

4. Fill in the blanks with the help of words given in the box.(Answer any 5 of 6): 5 x 1 = 5 Marks

Data	Sorting	Information	Pictogram	Decoding	Encoding
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- i. ... **Data**..are row facts and figures which may not have any meaning.
- ii. ... **Sorting** ...refers to arrange the data in a specific order.
- iii. ... **Decoding**..is the process of converting the coded message back to its original form.
- iv. When data is processed, it produces the ... **Information**..
- v. A... **Pictogram**..is a pictorial representation of some word or phrases.
- vi. ... **Encoding**..is the process of converting an original message into coded message.

5. Write the suitable answer from the given options. (Answer any 4 of 6): 4 x 1 = 4 Marks

- i.is an educational humanoid robot.
 - a. **Nao**
 - b. Root
 - c. Both a and b
- ii.is an Artificial Intelligence agent which is specialized to play **Go** a Chinese board game.
 - a. Dark Forest
 - b. Deep Blue
 - c. AlphaGo**
- iii. We have entered to the fourth industrial revolutions of
 - a. Electricity
 - b. IT
 - c. Artificial Intelligence**
- iv. In.....,Alan Turing proposes a test for machine intelligence, known as Turing Test.
 - a. **1950**
 - b. 1955
 - c. 1964
- v.is a smart speaker developed by Apple Inc to enjoy the music at home.
 - a. Roomba
 - b. Home Pod**
 - c. Robovac
- vi. Sofia is a social learning robot who can efficiently communicate usinglanguage.
 - a. **Natural**
 - b. Programming
 - c. Machine

Short Answer Questions (Answer any 7 of 10)

7 x 2 = 14 Marks

6. Define the term Artificial Intelligence.

Ans- **Artificial Intelligence (AI)** refers to the simulation of human intelligence in machines that are designed to think, learn, and make decisions like humans.

7. Name the robots which can communicate in natural language.

Ans- Sophia - A humanoid robot developed by Hanson Robotics.

Pepper - A social humanoid robot by SoftBank Robotics.

NAO - A humanoid robot by SoftBank Robotics, often used for educational purposes.

8. Name the various ways to represent the information.

Ans- Information can be represented in various ways, including:

- Text - Written words, sentences, or paragraphs.
- Numerical Data - Numbers, statistics, and quantitative data.

- Images - Photographs, illustrations, and graphics.
- Audio - Spoken words, music, or other sound recordings.
- Video - Moving visual content with or without sound

9. What is Encoding and Decoding?

Ans- Encoding is the process of converting information from one format or form into another.

Decoding is the process of converting encoded data back into its original format or form.

10. What is the purpose of “When Green Flag Clicked” block?

Ans- The "**When Green Flag Clicked**" block is used in programming environments like **Scratch** to start a project or program. It serves as a trigger, meaning that when the green flag icon (usually located at the top of the screen) is clicked, the instructions connected to this block are executed.

11. Write the steps to add a new sprite in Scratch?

Ans- To add a new sprite in Scratch, follow these steps:

- Open Scratch - Launch the Scratch application or go to the Scratch website.
- Go to the Sprites Section - At the bottom of the screen, you'll see the “Sprites” area.
- Click the “Choose a Sprite” Button - This button is located below the stage, and it has a small cat icon with a plus sign (+). Click on it.

12. Define any four services provided by internet.

Ans- Email (Electronic Mail)-Allows users to send and receive messages over the internet. It is one of the most widely used communication services for personal, business, and professional purposes.

World Wide Web (WWW)-A system of interlinked hypertext documents (web pages) that users can access via browsers. It provides information in text, images, and multimedia formats across websites.

File Sharing and Cloud Storage-Services like Google Drive, Dropbox, and OneDrive allow users to upload, store, and share files with others over the internet. Cloud storage makes it possible to access data from any device connected to the internet.

Social Media-Platforms like Facebook, Instagram, Twitter, and LinkedIn allow people to interact, share content, and communicate with others globally. Social media services are widely used for networking, entertainment, and marketing.

13. What do you mean by search engine? Explain.

Ans- A **search engine** is a software tool or online platform that helps users find information on the internet by entering keywords or queries. It indexes websites and their content to make it easy for users to locate relevant information.

14. What is Multimedia? How it is useful in the field of education?

Ans- **Multimedia** refers to the integration of different types of media, such as **text, audio, images, animation, video,** and **interactive content** to present information in a more engaging and dynamic way.

Multimedia incorporates various sensory elements (sight, sound, motion), making learning more engaging and stimulating. Students can learn more effectively when the content is presented in a variety of forms, such as videos, audio lectures, and interactive simulations.

15. What are the hardware requirements of a computer system to support multimedia?

Ans- To support multimedia, a computer system needs specific hardware components to handle the processing, storage, and display of multimedia content (such as video, audio, and graphics). The key hardware requirements are: CPU, RAM, Graphic Card

Long Answer Questions (Answer any 4 of 6)

4 x 3 = 12 Marks

16. Who was Alan Turing? What was the purpose of Turing Test?.

Ans- **Alan Turing** was a British mathematician, logician, and computer scientist, widely considered one of the pioneers of modern computing and artificial intelligence (AI).

The **Turing Test** was proposed by Alan Turing in his 1950 paper titled "Computing Machinery and Intelligence." The purpose of the test was to determine whether a machine can exhibit intelligent behavior indistinguishable from that of a human.

17. What do you mean by sorting Data? Differentiate between data and Information.

Ans- **Sorting data** refers to the process of arranging data in a specific order or sequence based on certain criteria. This order can be **ascending** (smallest to largest) or **descending** (largest to smallest). Sorting helps organize data in a meaningful way, making it easier to analyze, search, and visualize.

- **Data**- Raw, unprocessed facts or figures without context. Data may include numbers, text, or other forms that don't immediately convey meaning.
- **Information**- Data that has been processed, organized, or structured to provide meaning or value. Information is data that is interpreted and made useful.

18. What is the use of Sensing Block? How many blocks are there in Sensing block?

Ans- The **Sensing Block** in Scratch is used to interact with the environment or other elements in a project. It helps in detecting changes in the environment and provides real-time data to make the project more interactive

There are **15 blocks** in the **Sensing** category in Scratch. These blocks include various ways to interact with the stage and sprites.

19. How can you create an E-mail account? Write steps to create account.

Ans- Steps to Create a Gmail Email Account:

- Visit the Gmail Sign-Up Page

- Click on the "Create account" button
- Enter Your Personal Information:
- Choose a strong password
- Complete Verification:
- Agree to Terms and Conditions:

20. Name the five basic elements of multimedia. Explain any two elements.

Ans- The five basic elements of multimedia are:

- a. Text
- b. Images
- c. Audio
- d. Video
- e. Animation
- f. Text is one of the most fundamental elements of multimedia. It provides written information and helps convey messages, instructions, and descriptions.
- g. Audio refers to sound elements, such as music, sound effects, and spoken words (voiceovers).

21. Write the short notes on any two of the following:

- h. Podcast- A **podcast** is a digital audio file or series of audio files that are made available on the internet for streaming or downloading.
- i. Audio Slideshows- An **audio slideshow** combines still images with an audio track (such as narration, music, or sound effects) to create a multimedia presentation
- j. Animated Videos- **Animated videos** are multimedia presentations that use computer-generated graphics or animations to communicate ideas, tell stories, or explain concepts
