



BK BIRLA CENTRE FOR EDUCATION
SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARY CO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL
ANNUAL EXAMINATION 2024-25
ARTIFICIAL INTELLIGENCE



Class: VI
Date: 10-03-2025
Name:

Duration: 2 hrs.
Max Marks: 50
Exam No. :

General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of 19 questions in two sections: Section A & Section B.
3. Section A has Objective type questions (MCQ, Fill in the blanks, Match the following) whereas Section B contains Subjective type questions.
4. All questions of a particular section must be attempted in the correct order.
5. **SECTION A - OBJECTIVE TYPE QUESTIONS (24 MARKS):**
 - i. This section has 03 questions.
 - ii. Marks allotted are mentioned against each question/part.
 - iii. There is no negative marking.
 - iv. Do as per the instructions given.
6. **SECTION B – SUBJECTIVE TYPE QUESTIONS (26 MARKS):**
 - i. This section has 16 questions.
 - ii. A candidate has to do 11 questions.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.

MARKING SCHEME

SECTION A: OBJECTIVE TYPE QUESTIONS

I. Multiple Choice Questions: (Answer any twelve) (12 X 1 = 12)

- (1) Which of the following is a pictorial representation of an algorithm ?
(a) Pseudocode (b) Program (c) **Flowchart** (d) Algorithm
- (2) Kite/Diamond shaped box in a flowchart is used for :
(a) **Decision** (b) Input (c) Output (d) Process
- (3) Which one of the following is not a characteristics of a good algorithm ?
(a) Finiteness (b) Effectiveness (c) **Ambiguity** (d) Feasibility
- (4) Due to which of these abilities has human beings emerged as the dominant species on earth ?
(a) Great strength (b) Great speed
(c) Great size (d) **High intelligence**
- (5) Which of the following is not a sign of Intelligence ?
(a) Solve problems (b) Creating a poem
(c) Writing an original story (d) **Taking bath**
- (6) What is the function of the “when green flag clicked” command block ?
(a) Points sprite in the specified direction (b) If condition is true, runs the blocks inside

- (c) **Runs the script** (d) None of these
- (7) What is the function of the “Move 10 steps” command block ?
 (a) Runs the blocks inside over and over (b) **Move sprite forward**
 (c) Runs script below when specified key is pressed
 (d) None of the above
- (8) How do you create code in Scratch ?
 (a) **Snap block together** (b) Write code in the editor
 (c) Draw blocks in the editor (d) Copy and paste code
- (9) The cat in Scratch is an example of
 (a) Avatar (b) **Sprite** (c) Template (d) Character
- (10) A sprite can have one or more, allowing it to change its appearance as an application executes.
 (a) **Appearances** (b) Outfits (c) Costumes (d) Disguises
- (11) is a malware which gains access to your computer system and demands for ransom.
 (a) Email Spoofing (b) **Ransomware** (c) Phishing (d) Identity Theft
- (12) The short form of malicious software is
 (a) **Malware** (b) Malsoft (c) Maliware (d) Malisoft
- (13) is a type of cybercrime that uses the internet and technology to harass or stalk a person.
 (a) Cyber Harassing (b) Cyber Targeting
 (c) **Cyberstalking** (d) Cyberbullying
- (14) Which one of the following is susceptible to radiation and infection ?
 (a) **Human** (b) Robots (c) Both a and b (d) None of these
- (15) Robot is a
 (a) Multi functional manipulator (b) Programmable
 (c) **Both a and b** (d) None of these

II. State True/False : (Answer any eight)

(8 X 1 = 8)

- (1) True
 (2) False
 (3) True
 (4) True
 (5) True
 (6) False
 (7) True
 (8) True
 (9) True
 (10) False

III. Fill in the blanks. (Answer any four)

(4 X 1 = 4)

- (1) Google Glass
 (2) Virtual
 (3) Dulux Visualiser
 (4) IKEA place
 (5) Filters

SECTION B: SUBJECTIVE TYPE QUESTIONS

IV. Short Answer Type Questions: (Answer any seven)

(7 X 2 = 14)

(1) Explain an algorithm using an example.

Ans. : An algorithm is a step by step procedure of solving a problem. It is commonly used for data processing, calculation and other related computer and mathematical operations.

Example of Algorithm :

Step 1 : Take the ingredients

Step 2 : Mix ingredients

Step 3 : Pour ingredients mixture into a pan

Step 4 : Put it in an oven

Step 5 : Bake until ready

Step 6 : If ready, remove

Step 7 : Let it cool

Step 8 : Serve

(2) Define : (a) Human Intelligence

(b) Artificial Intelligence

Ans. :

Human Intelligence : It is a mental quality, that consists of the abilities to learn from experience, adapt to new situations, understand and handle abstract concepts, and use knowledge to manipulate one's environment.

Artificial Intelligence : The ability to learn and understand, to solve problems and to make decisions.

(3) Give any four examples of display of intelligence in the animal world i.e. apart from humans.

Ans. : Three examples of display of intelligence in the animal are :

- (i) Parrots can exactly mimic the words.
- (ii) Elephants are good at team work.
- (iii) Dolphins can identify themselves in the mirror.

(4) Explain block coding.

Ans. : Block based coding uses "blocks" of code which can be dragged and dropped onto a work environment and pieced together to make meaningful programs.

(5) Explain what the Looks block in Scratch does ?

Ans. : In Scratch, the "Looks" blocks control how sprites (characters or objects) appear on the stage. These blocks allow you to change the sprite's appearance, display messages, and manage visual effects.

(6) What is a cyber crime ? Explain at least two types of cybercrimes.

Ans. : It can be defined as a crime done by the internet to cause an immeasurable loss to the individual, organization or the government.

Types of Cyber Crimes :

Cyberbullying : It is the use of technology to harass, threaten, embarrass or target another person.

Cyberstalking :

Phishing :

Identity Theft : Identity theft is when someone illegally poses as you. It is when someone uses your personal data to impersonate you.

(7) Differentiate between Cyberbullying and cyberstalking.

Ans. : Cyberbullying and Cyberstalking : Cyberbullying is the use of technology to harass, threaten, embarrass or target another person. Cyberstalking is a type cybercrime that uses the internet and technology to harass or stalk a person.

(8) What is a Robot ? Write and explain any two characteristics of a Robot.

Ans. : A computerized device that can react to information from its environment or from humans is referred to as a robot.

Sensors :

Movement : a robot must be able to navigate its surroundings.

Energy : a robot must be self sufficient in terms of energy.

Perception :

Cognition :

Low level control :

(9) Explain any four challenges faced in the field of Robotics.

Ans. :

New materials

Mapping environments

Loss of jobs

Threats to the security

Creating multipurpose robots

Existential threat to humanity

Ethical

Social

(10) Define : (a) Augmented Reality

(b) Virtual Reality

Ans. :

(a) **Augmented Reality (AR):**

Augmented Reality (AR) is a technology that overlays digital information, such as images, sounds, or other data, onto the real world in real-time. It enhances the user's perception of their physical environment by blending virtual elements with real-world objects, typically through devices like smartphones, tablets, or AR glasses.

(b) Virtual Reality (VR):

Virtual Reality (VR) is a fully immersive digital environment that simulates a completely different world, typically experienced through VR headsets or specialized equipment. Unlike AR, VR entirely replaces the physical world with a computer-generated simulation, allowing users to interact within a 3D virtual space.

V. Long Answer Type Questions : (Answer any four)

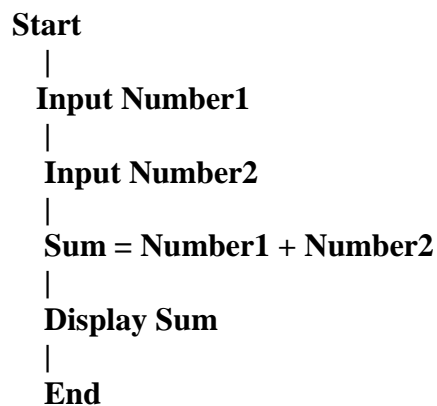
(4 X 3 = 12)

(1) Draw flowchart to find the following :

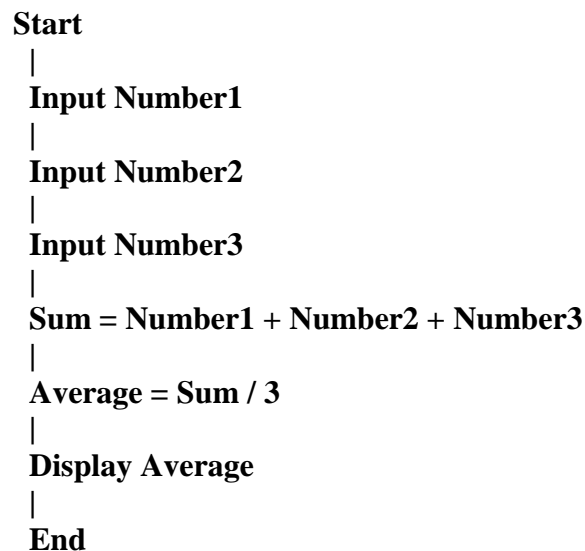
- (a) Sum of two numbers (b) Average of three numbers

Ans. :

- (a) Sum of two numbers :



- (b) Average of three numbers:



(2) Write and explain any three features of Intelligence

Ans. :

- (a) Handling incomplete data : Interpreting complete information from incomplete data
- (b) Handling contradictory data : Making sense from data having contradiction and ambiguity
- (c) Handling uncertain data : Making sense from fuzzy or uncertain data
- (d) Handling heuristics :
- (e) Ability to learn

(3) Give names of various blocks used in Scratch and describe any three.

Ans. :

Motion : These are used to move a sprite back and forth.

Looks : Used to change the look of the sprite.

Sounds : Tempo or sounds are used to control the sound flow in the program.

Events : Events handle trigger calls.

Controls : Conditional operators and loops are all in this category.

Sensing : It controls how to react whenever the mouse pointer hits the playground.

Operators : These are for the control and flow of arithmetic operations in the program.

Variables : You can declare the variables in your program using these blocks.

My Blocks : You can create your custom blocks from here.

(4) Describe any four commands from the Looks Block in Scratch.

Ans. :

1. **Say:** Displays a speech bubble with text for a specified duration.
2. **Think:** Shows a thought bubble with text.
3. **Change Costume:** Switches the sprite's appearance to a different costume.
4. **Show/Hide:** Makes the sprite visible or invisible.
5. **Change Size:** Adjusts the sprite's size.
6. **Set Color Effect:** Applies visual effects like color changes to the sprite.

(5) Different security measures should be followed to be safe from the dreadful act of cyber crime. Mention any six security measures.

Ans. :

- Strong password should be used.
- Use antivirus programmes to keep the system free of malware.
- Try to avoid opening websites which are not secure.
- Don't provide your personal information to any unknown person.
- Don't download software or other files from every website.
- Continuously update the system
- Be vigilant to avoid identity thefts
- Maintain privacy settings over social media.

(6) Differentiate between a Robot and a Machine.

Ans. :

	Robots	Machine
Anatomy	It don't require human intervention	It require human control
Sensory Input	It has several sensory parts	It don't have
Design and Development	It is more difficult	Not so difficult
Software	It require software to work	No software is required

***** ALL THE BEST *****