ORANGE

WORKSHEET 1

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI Ver. 2.1

Chapter-1

CLASS 6

SAFEGUARDING YOUR COMPUTER

A. Tick (✓) the correct option.

1. Which of the following option is the most common type of malware?
   a. Worm ☐ b. Virus ☐
   c. Spyware ☐ d. None of these ☐
2. Which of the following option tracks user's browser and download history and keeps popping advertisements on the screen?
   a. Virus ☐ b. Trojan Horse ☐
   c. Adware ☐ d. None of these ☐
3. Which of the following option is a set of programs that identify and remove malware?
   a. Antivirus ☐ b. Emotet ☐
   c. Virus ☐ d. None of these ☐

B. Write 'T' for true and 'F' for false.

1. Mydoom Worm would spread itself with the message: "Hacked By Chinese!" .....
2. Wabbit Virus (1974) makes multiple copies of itself until the system slows down and crashes. .....
3. Emotet secretly infects a smartphone (Android or iOS) and tracks the device completely for every action. .....
4. Storm Worm (2007) attacked millions of computers with an email about approaching bad weather. .....

C. Answer the following questions:

1. Define cyber crimes.

   .....

2. Name the types of online transaction frauds.

   .....

3. What rules should you remember while using social media?

   .....

Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

ORANGE

WORKSHEET 2

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI Ver. 2.1

Chapter-1

CLASS 6

SAFEGUARDING YOUR COMPUTER

A. Find the given words in the following grid:

Hints: Trojan, Spyware, Adware, Virus, Worm

P	C	B	T	Y	S	Z	N	D	A
N	U	V	U	F	E	H	M	U	D
S	J	O	T	R	O	J	A	N	W
Z	P	J	N	V	K	G	O	L	A
T	Y	Y	I	M	R	O	W	B	R
X	C	R	W	Y	G	S	F	Z	E
I	U	H	O	A	B	O	I	H	W
S	V	G	H	Y	R	K	C	K	M
Z	S	K	D	F	Z	E	U	S	W
I	H	F	M	L	E	Q	A	D	J

B. Answer the following questions:

1. Write any three harms caused by computer malware.

.....

.....

2. Write about the don'ts to protect the computer?

.....

.....

C. Rearrange the following:

1. SMTOR
2. CEDO RDE
3. TETEMO
4. SEPAGUS

Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

ORANGE

WORKSHEET 1

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI Ver. 2.1

Chapter-2

CLASS 6

FORMULAS AND FUNCTIONS IN EXCEL

A. Read the clues and answer the following:

1. It is used to find the largest value in the given range. .....
2. It is used to check whether the given condition is met, and returns value1 if the condition evaluates to true, and value2 if the condition evaluates to false. .....
3. It is a built-in function that returns the current date. .....
4. It calculates the maximum, minimum, average etc. of a set of numeric data. .....

B. Circle the correct option.

1. Absolute cell references in Excel use the (dollar ($) / equal (=) symbol).
2. Built-in formulas in Excel are called (functions/methods).
3. The (hash / exclamation) sign point separates the worksheet portion of the reference from the cell portion.
4. Formula is visible in the (Status bar / Formula bar) when you select a cell that contains the result of the formula.
5. (Statistical / Mathematical) function calculates the average of a given set of numbers.

C. Write the use of the following functions in Excel:

1. UPPER( ) – .....
2. COUNT( ) – .....
3. UPPER( ) – .....
4. SQRT( ) – .....

D. Rearrange the following:

1. CLLE
2. RNAGE
3. FNUCIONT

Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

ORANGE

WORKSHEET 2

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI Ver. 2.1

Chapter-2

CLASS 6

FORMULAS AND FUNCTIONS IN EXCEL

A. Define the following:

1. SUM() - .....
2. PRODUCT() - .....
3. INT() - .....
4. Len() - .....

B. Tick (✓) the correct option.

1. What are built-in formulas in Excel called?

   a. Equations ☐ b. Functions ☐

   c. Methods ☐ d. Cells ☐

2. Numbers or text values that do not change are called ..... .

   a. Function ☐ b. Constant ☐

   c. Reference ☐ d. All of these ☐

3. What will be the result of =UPPER("formula")?

   a. Formula ☐ b. FORMULA ☐

   c. formula ☐ d. None of these ☐

C. Write the formula to:

1. Concatenate the text strings "Touch" and "Pad".

   .....

2. Find the maximum value from the 3, 5, 9, 10, and 13 values.

   .....

3. Find the current day from the date 7/23/2019.

   .....

4. Extract three characters from the right side of the text string "Concatenate".

   .....

Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

ORANGE

WORKSHEET 1

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI Ver. 2.1

Chapter-3

CLASS 6

MORE ON EXCEL

A. Read the clues and answer the following:

1. It is related to the set of values. .....
2. It is a type of chart in Excel that shows the correlation between two sets of values. .....
3. It is the vertical axis that is used to plot the values in Excel. .....
4. It is a key which shows the meanings of symbols and colours used in the chart. .....
5. It can arrange the selected data in either ascending or descending order. .....

B. Label the components of a chart.

C. Name any four types of charts in Excel. Describe each one of them briefly.

.....

.....

.....

.....

Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI
Ver. 2.1

Chapter-3

CLASS 6

MORE ON EXCEL

A. Define the following:

1. Custom Sort - .....
2. Gridlines - .....
3. Chart - .....
4. Plot Area - .....

B. Tick (✓) the correct option.

1. How does a Bar Chart represent data?
   a. Using long rectangular rods placed horizontally ☐
   b. Using textures and pictures to emphasize data ☐
   c. Displaying data in the form of vertical bars ☐
   d. Emphasizing the area between the line and the axis ☐
2. How can you achieve sorting with specific conditions in Excel for multiple columns?
   a. Use the default sorting option ☐
   b. Utilize the Custom Sort feature ☐
   c. Sort each column separately ☐
   d. Combine all columns into one before sorting ☐

C. Number the steps to sort data.

Step .....- Click on Home tab.

Step .....- Select Sort A to Z (for text) or Sort Smallest to Largest (for numbers) to sort the data in ascending order.

Step .....- Select the data to be sorted.

Step .....-Click on the Sort & Filter command.

ORANGE

WORKSHEET 1

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

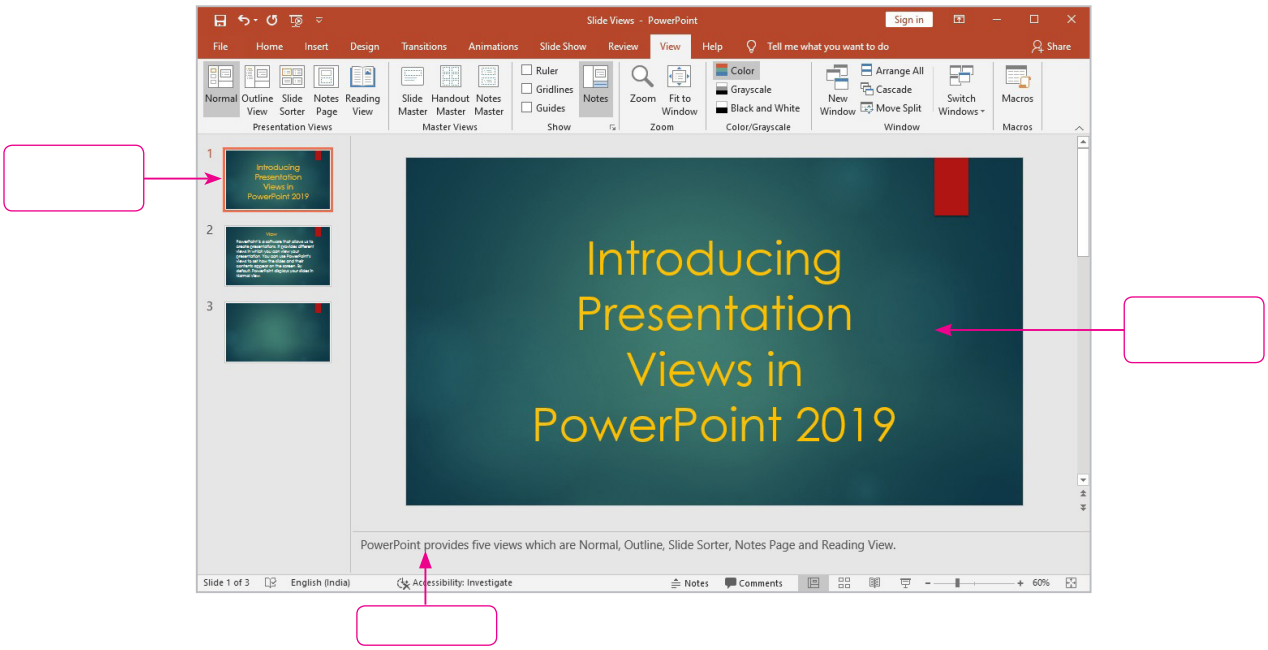
DIGICODE AI Ver. 2.1

Chapter-4

CLASS 6

ADVANCED FEATURES OF POWERPOINT 2016

A. Identify the Normal view of the presentation and write their names in the boxes given.



B. Write `T' for true and `F' for false.

1. Presentation can be viewed on full screen mode. .....
2. Video clip once inserted can be deleted by selecting it and pressing Delete key from the keyboard. .....
3. If you select a new animation from the menu in the Animation group, it will not replace the object's current animation. .....
4. In Slide Show View, you can modify the presentation while it is running. .....

C. Answer the following questions:

1. What is the purpose of the Slide Master in PowerPoint?

   .....

2. Give two ways in which you can preview the effect of animation.

   .....

Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

ORANGE

WORKSHEET 2

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI Ver. 2.1

Chapter-4

CLASS 6

ADVANCED FEATURES OF POWERPOINT 2016

A. Tick (✓) the correct option.

1. The shortcut key to start the slide show from the current slide is ..... .
   a. Alt + F5 ☐ b. Shift + F5 ☐
   c. Shift +F4 ☐ d. Shift + F3 ☐
2. Slide transition can be defined as ..... of one slide after another.
   a. Movement ☐ b. Deletion ☐
   c. Creation ☐ d. Transition ☐
3. The purpose of animation is to hold the ..... of the audience.
   a. attendance ☐ b. absence ☐
   c. attention ☐ d. arrival ☐
4. Which tab allows us to import and use the files or objects from any other application into our presentation?
   a. Home ☐ b. Insert ☐
   c. View ☐ d. File ☐

B. Fill in the blanks.

1. When we select the Audio on My PC option, the ..... dialog box appears.
2. To add an action button, we need to click on ..... command from the Illustrations group.
3. Normal View shows the current slide, the outline and the ..... .
4. The ..... allows you to view and manage all of the effects that are on the current slide.

Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

ORANGE

WORKSHEET 1

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI Ver. 2.1

Chapter-5

CLASS 6

ALGORITHMIC INTELLIGENCE

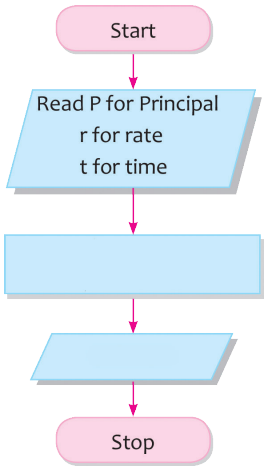
A. Tick (✓) the correct option.

1. Which of the following is drawn before creating a program?
   - a. Chart ☐ b. Scenery ☐
   - c. Flowchart ☐ d. Syntax ☐
2. What does a flowchart represent?
   - a. program ☐ b. algorithm ☐
   - c. symbol ☐ d. none of these ☐
3. Which of the following is not a symbol used in flowcharts?
   - a. Process ☐ b. Start/Stop ☐
   - c. Input/Output ☐ d. Control ☐

B. Write 'T' for true and 'F' for false.

1. Flowchart uses various symbols to show the process flow of the program. .....
2. In flowcharts, process box is used to show the branches in the process flow. .....
3. Algorithms and Flowcharts are different. .....

C. Complete the flowchart to calculate the simple interest.



Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

ORANGE

WORKSHEET 2

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI Ver. 2.1

Chapter-5

CLASS 6

ALGORITHMIC INTELLIGENCE

A. Fill in the blanks using the hints given below.

Hints: Mind Map, Left to right, Flowcharts, Sequential, Process

1. An algorithm is a collection of steps in a ..... manner.
2. Maintain the direction of the flow from ..... or top to bottom.
3. ..... is also a problem solving technique that allows us to organise ides. thoughts etc.
4. ..... shows the sequence of instructions in a single program.
5. Flow Line shows the direction in which the ..... flows.

B. Answer the following questions:

1. How does the flow line in a flowchart help in understanding a process?

   .....

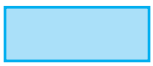
2. What is an algorithm?

   .....

3. Why is it important to have clear start and stop points in a flowchart?

   .....

C. Match the symbols with their functions used in flowcharts.

1.		a. Shows a process or action step
2.		b. Indicates a question or branch in the process flow
3.		c. Start and stop points of the flowchart

Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

ORANGE

WORKSHEET 1

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI Ver. 2.1

Chapter-6

CLASS 6

USING MAKECODE ARCADE

A. Tick (✓) the correct option.

1. Which blocks allow you to incorporate music in games?
   a. Array blocks ☐ b. Image blocks ☐
   c. Music blocks ☐ d. Function blocks ☐
2. In a game, which block would you use to move a character when the 'A' button is pressed?
   a. Motion block ☐ b. Varialble block ☐
   c. Controller block ☐ d. Display block ☐
3. Which blocks allow repetitive code execution?
   a. Variable blocks ☐ b. Logic blocks ☐
   c. Loops blocks ☐ d. Info blocks ☐
4. Where are custom functions defined in MakeCode?
   a. Logic blocks ☐ b. Advanced blocks ☐
   c. Loops blocks ☐ d. Math blocks ☐
5. What do text blocks allow you to generate?
   a. Images ☐ b. Arrays ☐
   c. Strings ☐ d. Buttons ☐

B. Write 'T' for true and 'F' for false.

1. Scene blocks generate text strings for dialogue. .....
2. Info blocks provide animation capabilities. .....
3. Loops blocks execute code repeatedly. .....
4. The share button downloads code to hardware. .....
5. Extension blocks restrict programming capabilities. .....
6. Variable blocks store data during gameplay. .....
7. Console blocks create lists of information. .....

Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI
Ver. 2.1

Chapter-6

CLASS 6

USING MAKECODE ARCADE

A. Fill in the blanks using the hints given below.

Hints: Text, advanced, Logic, Scene, Sprite, Math

1. ..... blocks add conditional logic to games.
2. ..... perform mathematical operations in code.
3. Use ..... blocks for sprite creation and definition.
4. ..... blocks change background images and colors.
5. ..... blocks generate text strings and dialogue.
6. Use ..... blocks to create custom functions.

B. Answer the following questions:

1. How do loop blocks help in programming games?

   .....

2. What do variables allow in game programming?

   .....

3. What do advanced blocks provide in MakeCode?

   .....

4. Where are custom functions defined in MakeCode?

   .....

5. How can you debug code in MakeCode Arcade?

   .....

6. What do text blocks allow you to generate?

   .....

7. How can you download a MakeCode Arcade game?

   .....

Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

ORANGE

WORKSHEET 1

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI Ver. 2.1

Chapter-7

CLASS 6

INTRODUCTION TO PYTHON

A. Tick (✓) the correct option.

1. Which of the following functions is used to take input from the user in Python?
   a. input() ☐ b. print() ☐
   c. float() ☐ d. str() ☐
2. Which mode in Python executes commands line by line and gives immediate results?
   a. Script Mode ☐ b. Batch Mode ☐
   c. Interactive Mode ☐ d. Debugging Mode ☐
3. Which of the following is not a valid variable name in Python?
   a. student_name ☐ b. _age ☐
   c. 1st_name ☐ d. total_score ☐

B. Write 'T' for true and 'F' for false.

1. Python is a compiled language. .....
2. The input() function automatically converts input data to the correct data type. .....
3. In Python, a variable can store multiple types of data, including strings, integers, and floats. .....

C. Write the output of the following program:

```
# Python program to demonstrate
# logical and operator
a = 10
b = 10
c = -10
if a > 0 and b > 0:
    print("The numbers are greater than 0")
if a > 0 and b > 0 and c > 0:
    print("The numbers are greater than 0")
else:
    print("Atleast one number is not greater than 0")
```

Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI Ver. 2.1

INTRODUCTION TO PYTHON

A. Guess who am I?

1. I am an operator used to assign the value of the right expression to the left operand.
2. I am an operator used to perform addition between two operands.
3. I am a function used to convert a string into a floating-point number.

B. Write the output of the following program:

1.
```
#Python program to demonstrate addition python
a = 12
b = 8
sum = a + b
print("The sum of", a, "and", b, "is", sum)
```

2.
```
# Python program to demonstrate
# logical and operator
a = 10
b = 12
c = 0
if a or b or c:
print("Atleast one number has boolean value as True")
else:
print("All the numbers have boolean value as False")
```

ORANGE

WORKSHEET 1

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI Ver. 2.1

Chapter-8

CLASS 6

HUMAN VS MACHINE INTELLIGENCE

A. Tick (✓) the correct option.

1. Which is NOT an AI capability?

   a. Learning ☐ b. Adapting ☐

   c. Reasoning ☐ d. Socializing ☐

2. Which statement compares humans and machines?

   a. Only humans can converse ☐ b. Only machines have memory ☐

   c. Both can recognize patterns ☐ d. Only humans can learn ☐

3. Which activity is easier for machines than humans?

   a. Making friends ☐ b. Identifying objects ☐

   c. Expressing emotions ☐ d. Jumping over obstacles ☐

4. What allows machines to converse with humans?

   a. Natural language processing ☐ b. Image recognition ☐

   c. Neural networks ☐ d. Deep learning ☐

B. Fill in the blanks using the hints given below.

Hints: Speed, Social, Algorithms, Adapting, Process, Natural language processing

1. ..... in machines enable learning from data.
2. Machines can ..... information faster than humans.
3. Humans are better at ..... to new situations.
4. Machines lack ..... skills seen in humans.
5. ..... allows machines to hold conversations.
6. Machines surpass humans in ..... and accuracy.

Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

ORANGE

WORKSHEET 2

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI
Ver. 2.1

Chapter-8

CLASS 6

HUMAN VS MACHINE INTELLIGENCE

A. Fill in the blanks using the hints given below.

Hints: Faster, New, Algorithms, Brain, Machines, Language, Machine

1. The ..... is the seat of human intelligence.
2. AI aims to develop intelligent ..... .
3. ..... learning enables AI systems to improve with experience.
4. Humans use ..... to converse while machines use NLP.
5. ..... in AI systems allow pattern recognition.
6. Machines calculate ..... than humans.
7. Humans easily adapt to ..... situations.

B. Answer the following questions:

1. What enables machines to mimic human intelligence?

   .....

2. Where does artificial intelligence in machines come from?

   .....

3. What allows machines to converse with humans?

   .....

4. Which cognitive tasks are easier for machines?

   .....

5. What are some forms of intelligence in humans?

   .....

6. How do machines and humans differ in terms of information processing?

   .....

Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

ORANGE

WORKSHEET 1

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI Ver. 2.1

Chapter-9

CLASS 6

AI TECHNOLOGIES

A. Tick (✓) the correct option.

1. Which stage analyzes the audio in speech recognition?
   - a. First ☐ b. Second ☐
   - c. Third ☐ d. Fourth ☐
2. Which technology can Siri and Alexa use?
   - a. Data mining ☐ b. Face recognition ☐
   - c. Speech recognition ☐ d. Image processing ☐
3. Which application does NOT use speech recognition?
   - a. Alexa ☐ b. Siri ☐
   - c. Snapchat ☐ d. Google Assistant ☐
4. What does AI improve in OCR systems?
   - a. Speed ☐ b. Cost ☐
   - c. Accuracy ☐ d. Format ☐
5. How are characters examined in OCR?
   - a. Syntax ☐ b. Patterns ☐
   - c. Grammar ☐ d. Context ☐

B. Answer the following questions:

1. What does OCR stand for and what does it do?

   .....

2. How does speech recognition work?

   .....

3. What enables virtual assistants like Alexa to understand commands?

   .....

Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI
Ver. 2.1

Chapter-9

CLASS 6

AI TECHNOLOGIES

A. Fill in the blanks using the hints given below.

Hints: Woody Bledsoe, Accuracy, Converts, Facial, Applying, AI, Alexa

1. ..... systems understand voice commands.
2. Voice assistants like ..... use speech recognition.
3. Snapchat uses face recognition for ..... filters.
4. ..... introduced the face recognition concept.
5. OCR improves ..... of digitizing text.
6. Speech recognition ..... spoken words to text.
7. Face recognition relies on ..... patterns.

B. Write 'T' for true and 'F' for false.

1. Speech recognition cannot convert audio faster than typing text. .....
2. Siri and Alexa use speech recognition technology. .....
3. Face recognition is not used for biometric authentication. .....
4. AI worsens the accuracy of speech recognition. .....
5. The concept of face recognition was introduced in the 1960s. .....
6. Snapchat uses image recognition to apply filters. .....
7. Voice assistants like Siri use speech recognition. .....

ORANGE

WORKSHEET 1

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI Ver. 2.1

Chapter-10

CLASS 6

TYPES OF ROBOTS

A. Tick (✓) the correct option.

1. Which of the following robots are used for manufacturing purposes?
   a. Industrial robots ☐ b. Collaborative robots ☐
   c. Service robots ☐ d. Military robots ☐
2. Which of the following robots are used for dangerous or repetitive tasks?
   a. Industrial robots ☐ b. Collaborative robots ☐
   c. Service robots ☐ d. Military robots ☐
3. Robotic lawn mower is an example of which type of robot?
   a. Industrial robots ☐ b. Collaborative robots ☐
   c. Service robots ☐ d. Military robots ☐
4. Aibo is an example of which type of robot?
   a. Toy Robot ☐ b. Military robot ☐
   c. Security robot ☐ d. Service robot ☐
5. Which of the following robots can float on water?
   a. A-PUFFER ☐ b. Lego ☐
   c. Aibo ☐ d. BRUIE ☐

B. Define the following:

1. Humanoid
2. Cobots
3. Military robots
4. Industrial robots

C. Short answer type questions.

1. Who created Aibo?
2. Name 2 Mars rovers launched by NASA.
3. State any one difference between a human and a humanoid.
4. Name any two applications of humanoids.
5. Name any two types of robots.

Grade: ☆ ☆ ☆ ☆ ☆

Teacher's Signature: _____

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI
Ver. 2.1

Chapter-10

CLASS 6

TYPES OF ROBOTS

A. Fill in the blanks.

1. ..... robot is a robot system which used for manufacturing purposes.
2. A ..... robot is a type of robot intended to physically interact with humans in a shared workspace.
3. A ..... robot is a robot that is designed to perform tasks that a either time consuming, dangerous or repetitive.
4. Security robots such as ..... have a night-vision-capable wide-angle camera that detects movements and intruders.
5. Autonomous precision seeding combines robotics with ..... .

B. Write 'T' for true and 'F' for false.

1. Monitoring huge fields of crop is a small job. .....
2. A medical robot is a robot used in the medical sciences. .....
3. Robots does not play an important role in space and research programmes. .....
4. The BRUIE robot can float on the water and roll its wheel along the underside of an icy surface while taking pictures and collecting data. .....
5. Lego and Furby were military robots introduced in 1998. .....

C. Assertion and reasoning based question.

Assertion(A): A humanoid robot is a robot with its body built to resemble the human body.

Reason(R): In general, humanoid robots have a torso, a head, two arms, and two legs.

1. Both A and R are correct and R is the correct explanation of A.
2. Both A and R are correct but R is NOT the correct explanation of A.
3. A is correct but R is not correct.
4. A is not correct but R is correct.