ORANGE

WORKSHEET 1

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

DIGICODE AI Ver. 2.1

Chapter-1

CLASS 7

APP DEVELOPMENT

A. Tick (✓) the correct option.

1. Which of the following uses apps?
   a. Hand-held devices ☐ b. Laptops ☐
   c. Desktop ☐ d. None of these ☐
2. ..... developed Android.
   a. Google ☐ b. Playstore ☐
   c. Apple Inc. ☐ d. Microsoft ☐
3. ..... are platform dependent apps.
   a. Native apps ☐ b. Hybrid apps ☐
   c. Web apps ☐ d. None of these ☐
4. ..... is not a gaming app.
   a. X ☐ b. PUBG ☐
   c. Angry Birds ☐ d. Candy Crush ☐
5. Which of the following is an appstore for android devices?
   a. App Store ☐ b. Microsoft Store ☐
   c. Play Store ☐ d. None of these ☐

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

1. Apps were not developed for desktops. .....
2. Notepad is an example of desktop application. .....
3. Web applications are typically developed using HTML and CSS. .....
4. Mobile apps cannot be used without internet connectivity. .....
5. Block editor view contains all the components required to design an application. .....

Grade: ☆ ☆ ☆ ☆ ☆

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ORANGE

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DIGICODE AI Ver. 2.1

Chapter-1

CLASS 7

APP DEVELOPMENT

A. Fill in the blanks.

1. Hybrid apps created by combining the features of ..... and .....apps.
2. The commonly used Android Emulators are .....
3. Android is an operating system for ..... devices developed by Google.
4. To use a ....., you need to install it first.

B. Answer the following questions:

1. What is an application?

   .....

2. Define hybrid apps.

   .....

3. State a difference between a web app and a native app.

   .....

4. State a benefit of e-commerce app.

   .....

C. Guess who am I?

1. I am an app store developed by Google. .....
2. I am an app store developed by Apple Inc. .....
3. I am a free app development tool, provided by Google. .....
4. I am also known as business apps. .....

Grade: ☆ ☆ ☆ ☆ ☆

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ORANGE

WORKSHEET 1

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DIGICODE AI Ver. 2.1

Chapter-2

CLASS 7

KRITA–IMAGE EDITING

A. Tick (✓) the correct option.

1. Which drop-down list is used to select the face of the font?
   a. Font Size ☐ b. Font Family ☐
   c. Letter Spacing ☐ d. Font Anchoring ☐
2. Which of the following is the place where you create and edit an image?
   a. Toolbox ☐ b. Workspace ☐
   c. Menu Bar ☐ d. Toolbar ☐
3. Which of the following displays the zoom level of the workspace?
   a. Resolution ☐ b. Status bar ☐
   c. Toolbar ☐ d. Menu Bar ☐

B. Fill in the blanks.

1. Resolution is used to specify the number of ..... per inch.
2. Krita is a free and ..... graphics editor.
3. By default, the name given to the file is ..... .
4. The layers can be added or ..... while working on the file.

C. Match the following:

1.		a.	Similar Color Selection Tool
2.		b.	Contiguous Selection Tool
3.		c.	Freehand Selection Tool
4.		d.	Rectangular Selection Tool

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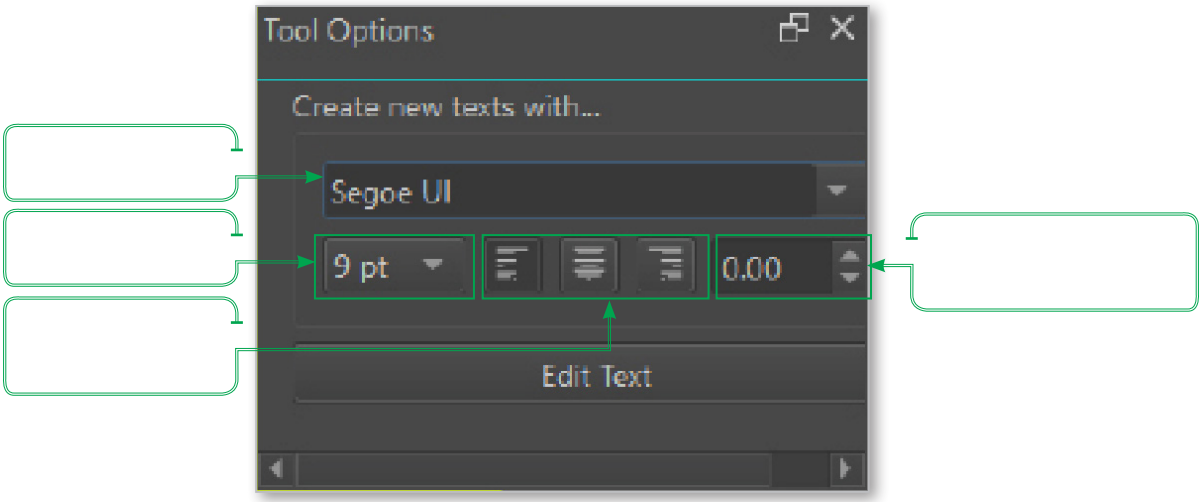
KRITA–IMAGE EDITING

A. Label the Tool Options Docker for Text Tool.



B. Answer the following questions:

1. Write the steps to use the Text tool.

.....

.....

2. Explain the common options under Content tab.

.....

.....

C. Competency-based/Application-based question.

Sonalika has opened a file in Krita. She wants to detect the edges of the image automatically. Suggest the tool which will do the job.

.....

.....

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DIGICODE AI Ver. 2.1

Chapter-3

CLASS 7

ADVANCED FEATURES OF EXCEL 2016

A. Read the clues and answer the following:

1. It is used to highlight cells that contain values greater than a particular value. .....
2. It is a way to arrange the data in ascending or descending order. .....
3. This command allows you to calculate group-wise sum. .....
4. It is a shortcut key used to print the worksheet. .....

B. Circle the correct option.

1. The subtotal command is available under (Insert tab /Outline group).
2. The (Conditional / Optional) Formatting option is available in Styles group under the Home tab.
3. The (Highlight Cells Rules / Data Bars) option is selected when you want to add data bars to the cells having numeric data.
4. The filters once applied (can / cannot) be easily removed.

C. Write the name of the command used to:

1. Add colour schemes to all selected cells slowly varying from top to bottom items.

   .....

2. Add icon sets to show which cells are acceptable, which are moderate and which need attention.

   .....

3. Add data bars to the cells having numeric data.

   .....

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DIGICODE AI Ver. 2.1

Chapter-3

CLASS 7

ADVANCED FEATURES OF EXCEL 2016

A. Tick (✓) the correct option.

1. Which tab must you select to add the Form command to the ribbon?

   a. Data ☐ b. View ☐

   c. Insert ☐ d. Home ☐

2. What must each column in a worksheet have before using it as a database for forms?

   a. Row numbers ☐ b. Filters ☐

   c. Headings ☐ d. None of these ☐

3. Which command allows you to move through records in a form?

   a. Go To ☐ b. Find Next/Find Prev ☐

   c. Search ☐ d. Track Changes ☐

4. Where is the Conditional Formatting command located?

   a. Insert tab ☐ b. Data tab ☐

   c. Home tab ☐ d. View tab ☐

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

1. Filtering deletes the data permanently from the sheet. .....
2. You can filter data using the Sort & Filter group under the Data tab. .....
3. Conditional formatting is applied to entire worksheets only. .....
4. Greater Than is a type of conditional formatting rule. .....
5. Filtered rows can be unhidden by removing the filter. .....

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DIGICODE AI Ver. 2.1

Chapter-4

CLASS 7

ALGORITHMIC INTELLIGENCE

A. Tick (✓) the correct option.

1. Which of the following uses special symbols to represent each step?

   a. Data ☐ b. Flowchart ☐

   c. Reasoning ☐ d. Algorithm ☐

2. Which of the following is the basic form of data that a computer can directly interpret ?

   a. Reasoning ☐ b. Binary code ☐

   c. Conditions ☐ d. Data ☐

3. Which of the following are used in a program to instruct the computer to make a decision?

   a. Conditional statements ☐ b. Algorithm ☐

   c. Binary code ☐ d. Flowchart ☐

4. Which part of the brain is responsible for logic and reasoning?

   a. Left brain ☐ b. Front brain ☐

   c. Right brain ☐ d. Central brain ☐

B. Fill in the blanks.

1. The left brain controls creativity and .....

2. An algorithm and a flowchart are the ..... to write a program.

3. Each letter and symbol has a unique ..... code.

4. Our brain ....., processes, and stores information.

Grade: ☆ ☆ ☆ ☆ ☆

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ORANGE

WORKSHEET 2

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DIGICODE AI Ver. 2.1

Chapter-4

CLASS 7

ALGORITHMIC INTELLIGENCE

A. Find six words related to algorithmic intelligence.

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

B. Answer the following questions:

1. What are conditions in a program?

   .....

   .....

2. Write an 'if' condition to display "Happy Birthday" if it is 2nd March today otherwise display "Thursday".

   .....

   .....

3. Write the if-then-else condition to check if a number is divisible by 5 or not.

   .....

   .....

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DIGICODE AI Ver. 2.1

Chapter-5

CLASS 7

MORE ON MAKECODE ARCADE

A. Tick (✓) the correct option.

1. Which Math block is used to return the remainder after division?
   a. divide ☐ b. mod ☐
   c. remainder of ☐ d. fraction of ☐
2. Which comparison block returns true if both text values are equal?
   a. text check ☐ b. equal (for text) ☐
   c. compare text ☐ d. same as ☐
3. Which of the following is NOT a type of Logic block in MakeCode Arcade?
   a. Conditional ☐ b. Loop ☐
   c. Comparison ☐ d. Boolean ☐
4. In MakeCode Arcade, where do you go to create a new variable?
   a. Game blocks category ☐ b. Logic blocks category ☐
   c. Math blocks category ☐ d. Variables blocks category ☐

B. Fill in the blanks.

1. Each variable in a program must have a ..... name.
2. No ..... characters or spaces are allowed in variable names.
3. The ..... block returns the absolute value of a number.
4. The ..... block returns the sum of two numbers.

C. Answer the following in one word:

1. Which block would you use to get the square root of a number? .....
2. Name the block that rounds off a number to the nearest whole number. .....
3. Which block is used to assign a value to a variable? .....
4. Which category is used to create a variable in MakeCode Arcade? .....

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MORE ON MAKECODE ARCADE

A. Answer the following questions:

1. Which Logic block do you use to compare two numbers?

   .....

2. What is the default comparison shown in Logic blocks?

   .....

3. What does the logical or block do?

   .....

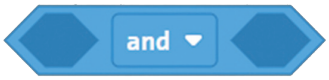
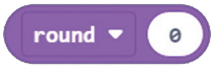
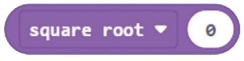
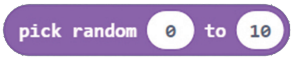
4. Which block category includes the splash block used for displaying text?

   .....

5. What is initialisation?

   .....

B. Match the following:

1.		a.	+=
2.		b.	/=
3.		c.	%=
4.		d.	*=
5.		e.	%
6.		f.	=

C. Write the description of the following operations:

1. Addition - .....
2. Equal - .....
3. Boolean false - .....
4. Multiplication - .....

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Chapter-6

CLASS 7

MORE ON PYTHON

A. Read the clues and answer the following:

1. These are the reserved words that has specific function in a program.

   .....

2. It is used to define the type of value a variable can contain.

   .....

3. It specifies the type of value a variable can contains.

   .....

4. It is a data type in Python to store numeric values.

   .....

5. It is a special symbol in Python used to perform arithmetic or logical computation.

   .....

B. Circle the correct option.

1. A (list/string) is a collection of data elements separated by comma(,).
2. The (parenthesis / exponent) has the highest precedence.
3. The second nested (if / else)indented block will run only when the first if condition evaluates to be true.
4. If the condition evaluates to (true/ false), then the control of execution is passed to the next statement after the if block.

C. Write the name of three types of conditional statements used in Python.

1. .....
2. .....
3. .....

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DIGICODE AI Ver. 2.1

Chapter-6

CLASS 7

MORE ON PYTHON

A. Tick (✓) the correct option.

1. What does the operator ** do in Python?

   a. Modulus ☐ b. Floor Division ☐

   c. Exponentiation ☐ d. Addition ☐

2. Which operator in Python performs exponential calculation?

   a. // ☐ b. % ☐

   c. ** ☐ d. + ☐

3. Which of the following has the highest precedence in Python?

   a. Addition ☐ b. Parentheses ☐

   c. and ☐ d. or ☐

B. Write syntax of the following:

1. if statement - .....

   .....

2. if...else statement - .....

   .....

3. nested if statement - .....

   .....

C. Write a Python program to check whether a candidate is eligible for voting or not.

.....

.....

.....

Grade: ☆ ☆ ☆ ☆ ☆

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DIGICODE AI Ver. 2.1

Chapter-7

CLASS 7

HUMANS AND MACHINES

A. Tick (✓) the correct option.

1. When was the first gaming joystick created?

   a. 1967 ☐ b. 1968 ☐

   c. 1972 ☐ d. 1982 ☐

2. Who is known as the father of wearable computing?

   a. Steve Mann ☐ b. Ivan Sutherland ☐

   c. John Mauchly ☐ d. Edmund Huey ☐

3. Which device revolutionized motion gaming?

   a. GameCube ☐ b. Wii ☐

   c. Virtual Boy ☐ d. XBOX ☐

4. Which company released the first touchscreen terminal?

   a. Nintendo ☐ b. Control Data Corporation ☐

   c. IBM ☐ d. Apple ☐

B. Fill in the blanks.

1. ..... tracked user motion for gaming inputs.
2. The ..... keyboard was one of the first text input devices.
3. ....., ..., ... and ..... are the 4 stages in human-machine interaction.
4. ..... was the first VR headset created by Ivan Sutherland.

C. Define the following terms:

1. Human-Machine Interaction - .....
2. Menu Driven Interface - .....

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Chapter-7

CLASS 7

HUMANS AND MACHINES

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

1. Ralph Baer invented the first gaming joystick. .....
2. Seiko made the first smartwatch. .....
3. Dexmo Exoskel launched a wireless VR glove. .....
4. The QWERTY keyboard was invented in the 19th century. .....

B. Answer the following questions:

1. What is a menu driven interface?

   .....

2. What was ENIAC?

   .....

3. What are the stages in human-machine interaction?

   .....

4. What does eye tracking allow?

   .....

C. Define the following terms:

1. Command Line Interface - .....

   .....

2. Touch Sensitive Interface - .....

   .....

3. QWERTY- .....

   .....

4. DATAR - .....

   .....

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DIGICODE AI
Ver. 2.1

Chapter-8

CLASS 7

TYPES OF AI

A. Tick (✓) the correct option.

1. What is the branch of computer science that focuses on developing machines which can think and work like human beings?

   a. Human Intelligence ☐ b. Natural Intelligence ☐

   c. Artificial Intelligence ☐ d. None of these ☐

2. AI can be divided into how many categories?

   a. 1 ☐ b. 2 ☐

   c. 3 ☐ d. 4 ☐

3. Which category of AI can perform dedicated tasks with intelligence?

   a. Weak AI ☐ b. Strong AI ☐

   c. Super AI ☐ d. None of these ☐

4. Which category of AI machine would be smarter than an average human being and would also understand human emotions?

   a. Weak AI ☐ b. Strong AI ☐

   c. Super AI ☐ d. None of these ☐

5. Which of the following is an example of Weak AI?

   a. Siri ☐ b. Chatbots ☐

   c. IBM Watson ☐ d. All of these ☐

B. Define the following:

1. Artificial Intelligence

   .....

2. Weak AI

   .....

3. Strong AI

   .....

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TYPES OF AI

A. Fill in the blanks.

1. ..... is the branch of computer science that focuses on developing machines which can think and work like human beings.
2. Machine's ..... is created by the humans.
3. Siri, Google Assistant, and chatbots are examples of ..... AI.
4. Machines that can think, learn, and solve problems like humans are part of ..... AI.
5. Machines with ..... intelligence would be able to understand human emotions.

B. State whether these statements are true or false.

1. Weak AI cannot solve multiple unrelated problems. .....
2. AI refers to the ability of machines to perform cognitive tasks like thinking, perceiving, learning, problem solving and decision making. .....
3. AI can be classified into 4 categories which are based on the functionality of AI applications. .....
4. Narrow AI performs dedicated tasks with intelligence. .....
5. Weak AI machines have human like intelligence. .....

C. Assertion and reasoning based question.

Assertion (A): Machines can process huge volumes of data quickly and with accuracy.

Reason (R): Machine learn from information provided to them and through regular training.

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.

Select the correct answer from above options.

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DIGICODE AI Ver. 2.1

Chapter-9

CLASS 7

SMART LIVING

A. Tick (✓) the correct option.

1. Which is a benefit of smart cities?
   a. Traffic jams ☐ b. Water shortage ☐
   c. Economic growth ☐ d. Power wastage ☐
2. Which stage of AI involved machine learning systems?
   a. First ☐ b. Second ☐
   c. Third ☐ d. Fourth ☐
3. Which industry will AI transform in the future?
   a. Agriculture ☐ b. Education ☐
   c. Medicine ☐ d. Business ☐
4. How can CCTV monitoring help reduce crime?
   a. Face recognition ☐ b. Motion detection ☐
   c. Image analysis ☐ d. Object tracking ☐

B. Fill in the blanks.

1. ..... cities have efficient public utility services.
2. Self-driving cars use ....., cameras and AI.
3. AI serves ..... content on social media platforms.
4. The ..... alerts users about home security breaches.

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

1. Traffic is better managed in smart cities. .....
2. Education quality is unaffected by AI. .....
3. Cybersecurity is weakened by AI systems. .....
4. Machine learning was the first wave of AI. .....

Grade: ☆ ☆ ☆ ☆ ☆

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Chapter-9

CLASS 7

SMART LIVING

A. Answer the following questions:

1. How can AI improve education?

.....

2. What is the future of transportation with AI?

.....

3. How will AI impact cybersecurity?

.....

4. What are some devices used in smart homes?

.....

5. Write any five benefits of Smart Homes.

.....

.....

.....

.....

.....

B. Identify the name of the devices given below:

1.

.....

2.

.....

3.

.....

4.

.....

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DIGICODE AI
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Chapter-10

CLASS 7

FIELDS WHERE ROBOTS ARE USED

A. Fill in the blanks.

1. ..... was the first industrial robot used on assembly lines.
2. ..... is a four-legged military robot that can climb stairs.
3. ..... is a customer service robot that works in shopping centers.
4. ..... slices noodles and tosses them into boiling water.
5. The ..... surgical system allows doctors to operate with precision.

B. Write a short note on the different fields where robots are used.

1. Security and Surveillance - .....

   .....

   .....

2. Military - .....

   .....

   .....

3. Manufacturing - .....

   .....

   .....

4. Cooking - .....

   .....

   .....

Grade: ☆ ☆ ☆ ☆ ☆

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DIGICODE AI Ver. 2.1

Chapter-10

CLASS 7

FIELDS WHERE ROBOTS ARE USED

A. Tick (✓) the correct option.

1. Which robot helps with security and surveillance?
   a. Spot ☐ b. Atlas ☐
   c. Herbie ☐ d. Flyability ☐
2. Which was the first robot used in manufacturing?
   a. Omnibot 2000 ☐ b. Unimate ☐
   c. Tomy Omnibot ☐ d. PUMA 560 ☐
3. Which robot looks like a tank in the military?
   a. MAARS ☐ b. PackBot ☐
   c. Crusher ☐ d. MULE ☐
4. Which robot can recognize and chat with customers?
   a. Pepper ☐ b. Sophia ☐
   c. Nadine ☐ d. Atlas ☐

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

1. Flyability is a security drone. .....
2. Unimate worked on assembly lines in the 1960s. .....
3. Nadine is a customer service robot. .....
4. Moley is a sushi chef robot. .....
5. Da Vinci performs simple surgeries. .....
6. Robonaut was the first robot in space. .....

C. Answer the following questions:

1. How do robots help with security?

   .....

2. Where was the first industrial robot Unimate used?

   .....

Grade: ☆ ☆ ☆ ☆ ☆

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