

Name: _____

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Class: _____ Section: _____ Date: _____

NUMBER SYSTEM

A. Tick (✓) the correct option.

1. Repeated division by 2 is done for converting

a. Decimal to Octal

☐

b. Decimal to Hexadecimal

☐

c. Decimal to Binary

☐

d. None of these

☐

2. What is the decimal number of binary number 101100_2 ?

a. 44

☐

b. 55

☐

c. 66

☐

d. 33

☐

3. What is the binary number of decimal number 980_{10} ?

a. 111101010

☐

b. 1111010100

☐

c. 1111010101

☐

d. 1011010100

☐

4. Decimal number system is also known as

a. Base-10 system

☐

b. Base-2 system

☐

c. Base-8 system

☐

d. Base-16 system

☐

B. How is data stored in computer memory?

.....

.....

C. What are the different types of number system?

.....

.....



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NUMBER SYSTEM

A. Fill in the blanks:

1. _____ is also known as base-2 number system.
2. Binary number system has only two symbols or digits _____ and _____
3. A number system made up of eight digits from 0 to 7, is known as the _____ number system.
4. _____ displays 16 digits and symbols.
5. _____ is also known as base-10 number system.

B. Convert $(10111011)_2$ to a decimal number

Position Digit	Position Value	Multiplication of Position value and Position Digit

Sum of the products = _____

Therefore, $(10111011)_2 =$ _____

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ADVANCED FEATURES OF EXCEL

A. Match the following:

- | | |
|--------------------|--|
| 1. Filtering data | a. Lowest to highest |
| 2. Ascending Order | b. Sorting by multiple columns |
| 3. Custom Sorting | c. is used to check a condition to be evaluated as True or False |
| 4. IF function | d. used to calculate the total of a given set of value |
| 5. SUM function | e. seeing the important data |

B. Prepare a list of all the stationery items along with rate list and find out the quantity required by you. The value you have to spend on each item is mentioned in To Value column.

	A	B	C	D	E
1	Stationery Items	Rate	Quantity Required	Amount	To Value
2	Pen	40		0	320
3	Notebook	120		0	720
4	Pencil	50		0	250
5	Eraser	5		0	100
6	Sharpner	5		0	100
7	Ruler	5		0	100
8	Drawing sheets	90		0	540
9	Ruled sheets	80		0	480

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ADVANCED FEATURES OF EXCEL

A. Fill in the blanks.

- Sort & Filter command is present under the tab.
- The IF function takes three arguments into consideration: the, the value to be displayed when the condition is true, and the value to be displayed when the condition evaluates to be false.
- key combination is used to filter the data.
- Conditional Formatting command is present under group.

B. Write T for true and F for false statements.

- Sorting means arranging the data in an unordered sequence.
- In ascending order, sorting is done from A to Z.
- Excel allows us to do sorting on a range of selected cells.
- Custom sort allows us to add the levels of sorting.

C. Differentiate between the following:

Sorting data	Filtering data
.....
.....

D. Answer the following questions:

- What are the two different ways of sorting columns?

- How is sorting beneficial to us?

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MORE ON KRITA

A. Tick (✓) the correct option.

1. What is the function of the "Transform Tool"?

- | | | | |
|----------------------|--------------------------|---------------------------------------|--------------------------|
| a. To crop the image | <input type="checkbox"/> | b. To rotate, scale, or move elements | <input type="checkbox"/> |
| c. To paint | <input type="checkbox"/> | d. To erase layers | <input type="checkbox"/> |

2. In Krita, which layer type supports transparency?

- | | | | |
|-----------------|--------------------------|---------------------|--------------------------|
| a. Vector Layer | <input type="checkbox"/> | b. Filter Layer | <input type="checkbox"/> |
| c. Paint Layer | <input type="checkbox"/> | d. Background Layer | <input type="checkbox"/> |

3. Krita allows working with multiple layers to:

- | | | | |
|---------------------------|--------------------------|--------------------------------|--------------------------|
| a. Flatten images | <input type="checkbox"/> | b. Organise content separately | <input type="checkbox"/> |
| c. Export only background | <input type="checkbox"/> | d. Save memory | <input type="checkbox"/> |

4. To zoom in and out of the canvas, which keys are commonly used?

- | | | | |
|------------------------|--------------------------|------------------|--------------------------|
| a. Ctrl + Mouse Scroll | <input type="checkbox"/> | b. Shift + Click | <input type="checkbox"/> |
| c. Alt + Z | <input type="checkbox"/> | d. Spacebar | <input type="checkbox"/> |

B. Competency-Based Questions.

1. Aman wants to create a mirror reflection effect in Krita. Which tool or feature can help him?
2. While painting, Meera wants to view her canvas without distractions. What should she do?
3. You rotated your canvas while sketching. How can you reset it back to the original orientation?

C. Rectify the Given Statements.

1. Canvas-only mode hides only the color palette.
.....

2. To draw in Krita, we must use the Move Tool.
.....

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MORE ON KRITA

A. Tick (✓) the correct option.

1. Which key is used with the Move Tool to duplicate a layer content?

a. Ctrl

☐

b. Alt

☐

c. Shift

☐

d. Tab

☐

2. Canvas Rotation is helpful for:

a. Changing the color

☐

b. Drawing at different angles

☐

c. Increasing contrast

☐

d. Flipping layers

☐

3. The layer stack in Krita is visible in:

a. Toolbar

☐

b. Docker

☐

c. Menu Bar

☐

d. Navigation Panel

☐

4. Krita's primary function is:

a. Word processing

☐

b. 3D modeling

☐

c. Digital painting

☐

d. Video editing

☐

B. Competency-Based Questions

1. Krita crashed before saving your work. What file recovery feature might help you restore your project?

2. Write the steps to create a new document and add a new paint layer in Krita.

C. Rectify the Given Statements.

1. The Selection Tool helps to paint the canvas.

.....

2. Krita files are saved by default in JPG format.

.....



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LISTS AND TABLES IN HTML5

A. Write the output of the following HTML code:

```
<ol type="a">
<li>Bread</li>
<li>Butter</li>
<li>Jam</li>
</ol>
```

B. What would be the output of the following HTML statements?

```
<ul style="list-style-type: circle">
<li>English</li>
<li>Math</li>
<li>Science</li>
</ul>
```

C. Read the HTML code and answer the following questions:

```
<!DOCTYPE html>
<html>
<head>
<title>Learning HTML</title>
</head>
<body>
<p style="font-family:Arial;font-size:20px;color:blue">
This HTML page contains text and image.</p>

</body>
</html>
```

1. What is the text that is displayed in the title bar of the window?
2. What is the size and colour of the text that is displayed on the web page?
3. What is the location of the image used in the web page?
4. What is the height of the image used in the web page?

LISTS AND TABLES IN HTML5

A. Write the HTML code for the following outputs:

1. Mobile Operating System

- Android OS
- Windows phone OS
- Symbian
- iOS

2. Mobile Manufacturer

- Samsung.
- Apple.
- Huawei.
- Nokia.

B. Write the HTML code to display the following table:

Name of the student	Height	Weight
Aadya Kaushal	5 ft 4 in	45 kg
Shweta Kaushal	5 ft 2 in	50 kg
Seema Sharma	5 ft 7 in	65 kg
Ashana Sardana	4 ft 9 in	49 kg

C. What are the attributes associated with Table tag?

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IMAGES, LINKS, AND FORMS IN HTML5

A. Tick (✓) the correct option.

- To create a link, we use tag.
 - `
` ☐
 - `<hr>` ☐
 - `<a>` ☐
 - `<iframe>` ☐
- The process of linking a particular section of the same web page is called
 - interlinking ☐
 - intralinking ☐
 - cross-linking ☐
 - None of these ☐
- allow us to divide the webpage into several independent parts or panes.
 - Form ☐
 - Link ☐
 - Frames ☐
 - Images ☐
- provides an easy way to collect required information from the site visitors.
 - Image ☐
 - Frames ☐
 - Links ☐
 - Form ☐
- input control masks the characters as soon as the user enters them.
 - Single line ☐
 - Password ☐
 - Multi line ☐
 - Radio ☐

B. Differentiate between the following:

1. Checkbox

Radio Button

.....

.....

2. Submit Button

Reset Button

.....

.....

Name: _____

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IMAGES, LINKS, AND FORMS IN HTML5

A. Identify the tag or attributes used:

1. to allow user to enter multiple lines.

.....

2. to embed video in an HTML document.

.....

3. to control the height of the iframe.

.....

4. to send all the form data to the server.

.....

B. Answer in 1-2 sentences.

1. What is the use of a Form in HTML?

.....
.....

2. What does the a:active property signifies?

.....
.....

3. How can we create clickable buttons in HTML?

.....
.....

4. Write the benefits of using CSS with HTML documents?

.....
.....

Name: _____

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DEVELOPING MOBILE APPS

A. Tick (✓) the correct option.

- Which of the following is a free app development tool provided by Google?

a. App store	<input type="checkbox"/>	b. App Inventor	<input type="checkbox"/>
c. Play store	<input type="checkbox"/>	d. Duolingo	<input type="checkbox"/>
- Which view in the App Inventor contains all the components required to design an application?

a. Design	<input type="checkbox"/>	b. Block editor	<input type="checkbox"/>
c. Tool editor	<input type="checkbox"/>	d. None of these	<input type="checkbox"/>
- Project Designer window is divided into panes.

a. One	<input type="checkbox"/>	b. Two	<input type="checkbox"/>
c. Three	<input type="checkbox"/>	d. Four	<input type="checkbox"/>
- Which pane shows list of all the components added to the screen in hierarchical view?

a. Palette pane	<input type="checkbox"/>	b. View pane	<input type="checkbox"/>
c. Components pane	<input type="checkbox"/>	d. Properties Pane	<input type="checkbox"/>
- In window, we will design the interface by choosing buttons, images or text boxes and specify the functionalities of our app.

a. Project Designer	<input type="checkbox"/>	b. View pane	<input type="checkbox"/>
c. Components pane	<input type="checkbox"/>	d. Properties Pane	<input type="checkbox"/>

B. Answer Briefly.

- What do you mean by MIT App inventor?

.....

- What is the purpose of Block Editor?

Name: _____

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DEVELOPING MOBILE APPS

A. Fill in the blanks.

1. _____ is used to create applications for smart phones.
2. An _____ block that will handle what happens when the button on your app is clicked.
3. _____ contains all the predefined blocks in the application.
4. _____ view is the place where we combine blocks to execute an application.

B. Answer Briefly.

1. Write about the two main windows of App Inventor. What do they do?

.....

.....

2. How do we test an app while we are developing it in App Inventor?

.....

.....

3. What is the use of Event Handler block?

.....

.....

4. How would you build and test apps in the App Inventor if you don't have a phone?

.....

.....

Name: _____

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Class: _____ Section: _____ Date: _____

GOOGLE APPS

A. Tick (✓) the correct option.

1. Which of the following is an online storage tool provided by Google?

a. Google Maps

☐

b. Google Drive

☐

c. Gmail

☐

d. Google Meet

☐

2. It is a web-mapping tool that enables us to display maps by searching an address or place of interest.

a. Google Drive

☐

b. Google Calendar

☐

c. Google Maps

☐

d. None of these

☐

3. is an online version of Microsoft PowerPoint developed by Google in 2006.

a. Google Slides

☐

b. Google Sheets

☐

c. YouTube

☐

c. Google Meet

☐

4. Which of the following is a spreadsheet application offered by Google?

a. Excel

☐

b. Google Wokspace

☐

c. Gmail

☐

d. Google Sheets

☐

5. is an app that automatically backs up and organises our photos and videos that we shoot on our smartphones.

a. Google Photos

☐

b. Google Classroom

☐

c. Google Contact

☐

d. None of these

☐

B. Answer in one or two lines.

1. What apps does Google Workspace include?

.....

2. How Google Workspace is useful for education purposes?

.....

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

GOOGLE APPS

A. Fill in the blanks.

1. _____ is the web-based survey administration software offered by Google which allows users to create forms, surveys, and quizzes.
2. _____ keeps track of our personal appointments and also helps us synchronise our appointments with the rest of our team.
3. Google Translate is a _____ service offered by Google.
4. Google gives you _____ GB of free cloud storage.
5. Google has developed a number of web-based applications that are collectively known as _____.

B. Answer Briefly.

1. Write any two features of Google Drive.

.....

.....

2. How can we protect data in Google Sheets?

.....

.....

3. What is Google Calendar used for?

.....

.....

4. Write the reasons for choosing cloud computing.

.....

.....

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

CYBER SECURITY

A. Tick (✓) the correct option.

- Which of the following is the practice of protecting computers from malicious attacks?

a. Phishing	<input type="checkbox"/>	b. Cyber Security	<input type="checkbox"/>
c. Hacking	<input type="checkbox"/>	d. Stalking	<input type="checkbox"/>
- Which of the following is the illegal practice of obtaining sensitive information through e-mails?

a. Plagiarism	<input type="checkbox"/>	b. Phishing	<input type="checkbox"/>
c. Spamming	<input type="checkbox"/>	d. None of these	<input type="checkbox"/>
- Which of the following refers to stealing one's idea or invention of others and use it for their own benefits?

a. Theft	<input type="checkbox"/>	b. Hacking	<input type="checkbox"/>	c. Plagiarism	<input type="checkbox"/>	d. Phishing	<input type="checkbox"/>
----------	--------------------------	------------	--------------------------	---------------	--------------------------	-------------	--------------------------
- Which of the following refers to the rules that govern our actions when we use computers and the Internet?

a. Cyber Security	<input type="checkbox"/>	b. Cyber Ethics	<input type="checkbox"/>
c. Cyber Law	<input type="checkbox"/>	d. None of these	<input type="checkbox"/>

B. Answer in one or two lines.

1. What is cyber security?

.....

2. Write about any two tips to avoid phishing?

.....

3. Define Plagiarism.

.....

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

CYBER SECURITY

A. Fill in the blanks.

1. _____ is the unauthorized copying or stealing of software, movies, music and making these copies available on the Internet.
2. Cyber security is also known as _____.
3. The online or Internet based illegal acts are called _____.
4. Hacking is the act of intruding into a computer system and the person involved in these activities is called a _____.
5. _____ rights are the exclusive rights given by the government to the owners of intellectual creations.

B. Answer Briefly.

1. What is NATIONAL CYBER SECURITY POLICY, 2013?

.....

.....

2. Mention some of the ways to avoid hacking.

.....

.....

3. What do you understand by Cyber Security?

.....

.....

Name: _____

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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 fundamental form of the programming data?

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

☐

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

Hints: Base, Information, Acquires, Process

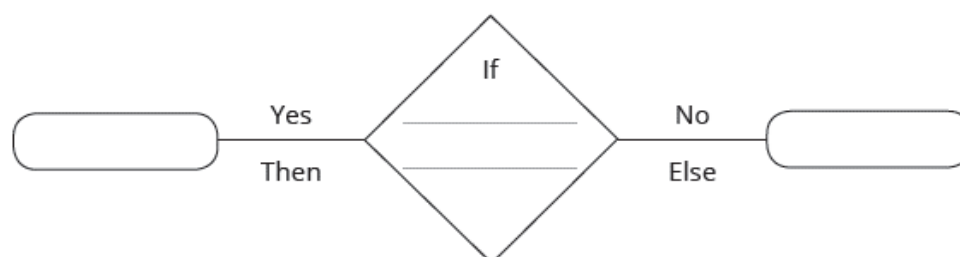
1. Computers store and data and information using binary code in the form of digital 1s and 0s.

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

3. Processing of is very important to write an algorithm.

4. Our brain, processes, and stores information.

C. What would happen if ... we had to live in a world without water?



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Chapter-9

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.

.....

.....

Name: _____

Roll No: _____

Class: _____ Section: _____ Date: _____

TOKENS AND DATA TYPES IN PYTHON

A. Tick (✓) the correct option.

- _____ is not a logical operator.
 a. or ☐ b. not ☐ c. and ☐ d. is ☐
- _____ operator checks for the values on either side of operator are not equal.
 a. != ☐ b. == ☐ c. > ☐ d. is not ☐
- $x += 3$ means
 a. Increment the values with the value specified after = symbol. ☐
 b. Decrease the values with the value specified after = symbol. ☐
 c. Assign value to the variable. ☐
 d. Value of a variable is specified after = symbol. ☐
- If $x = 5$, then $\text{print}(x > 4 \text{ and } x < 10)$ will return
 a. False ☐ b. True ☐ c. Not clear ☐ d. Unknown ☐

B. Answer Briefly.

- Define Python.

.....

.....

.....

- What is the difference between string and list?

.....

.....

.....

Name: _____

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Class: _____ Section: _____ Date: _____

TOKENS AND DATA TYPES IN PYTHON

A. Fill in the blanks.

1. are the reserved memory locations where we can store values.
2. errors are related to the logic of the program.
3. operator assigns the value of operand on the right side to the left side operand.
4. Each variable in Python is associated with some
5. A is just like a list.

B. Answer the following questions:

1. Explain the Python operators by giving one example each.

.....

.....

.....

.....

2. Mention the rules to be followed while declaring a variable in Python.

.....

.....

.....

.....

Name: _____

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FUTURE OF ARTIFICIAL INTELLIGENCE

A. Tick (✓) the correct option.

1. What of the following is the characteristics of a sustainable future smart city?
 - a. Provides better services and solves problems of the residents ☐
 - b. Reduces inconvenience ☐
 - c. Improves social and economic quality ☐
 - d. All of these ☐
2. Which of the following is a type of road that uses AI-enabled devices to monitor the condition of road, traffic level and speed of vehicle?

a. Smart City <input type="checkbox"/>	b. Automated Transportation <input type="checkbox"/>
c. Traffic Management <input type="checkbox"/>	d. Smart Highway <input type="checkbox"/>

B. Answer the following questions:

1. What modern, innovative technologies should be used to develop the city of the future according to smart city concept?

.....

.....

2. Will AI replace humans in the workplace?

.....

.....

3. Write about some real world application of AI.

.....

.....

FUTURE OF ARTIFICIAL INTELLIGENCE

A. Answer the following questions:

1. Write about the common terms of AI you know.

.....

.....

.....

2. How will AI change the future?

.....

.....

.....

3. Why do we need Artificial Intelligence?

.....

.....

.....

4. How is AI helping automated transportation systems?

.....

.....

.....