Class 7

Answer Key

CodePilot (5.0)

1. Emerging Trends

LEARNING LOGS

A. 1. (ii) 2. (i) 3. (iii) 4. (ii) 5. (i)

B. 1. Software robots 2. Blocks 3. Digital 4. Virtually
5. Internet of things (IoT)

C. 1. T 2. F 3. T 4. T 5. F

D. 1. The key features of 5G include faster speeds, lower latency, increased connectivity and enhanced reliability.

2. Augmented Reality (AR) is a technology that adds digital information, like images, sounds or videos, to the real world. Virtual Reality (VR) creates an entirely digital environment that you can explore and interact with.

3. 3D printing in healthcare is used to create prosthetics, custom implants, and even organ models for surgery planning.

4. Bioinformatics helps in fields like medicine and agriculture by using computational tools and algorithms to study biological data, such as DNA sequences, protein structures, and gene expression. This helps to understand complex biological systems and solve problems in these fields.

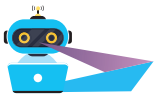
5. Cloud computing refers to the use of computing services—such as storage, processing power and software—available over the Internet. Two examples of cloud-based services are: Google Drive and Dropbox.

COMPETENCY-BASED QUESTIONS

1. Nikhil should use 3D printing to design a model and to quickly create prototypes.
2. Google Drive or Microsoft OneDrive are cloud-based platforms that would be best for sharing files and working together in real time.

LAB LEARNING

Do it yourself.



CODE CHECK

Do it yourself.

2. Number System

A. 1. (i) 2. (ii) 3. (iii) 4. (iii) 5. (ii)

B. 1. 10 2. 16 3. 125 4. Base 5. Nibble

C. 1. T 2. T 3. T 4. T 5. F

D. 1.
$$\begin{array}{r} 1101 \\ -\ 1011 \\ \hline 0010 \end{array}$$

2. The hexadecimal number system is a base-16 system that uses digits 0–9 and letters A–F (for 10–15). For example, $(2F3)_{16}$

3. a. $(51)_{10}$

2	51	
2	25	1
2	12	1
2	6	0
2	3	0
	1	1

Hence, $(51)_{10} = (110011)_2$

b. $(165)_{10}$

2	165	
2	82	1
2	41	0
2	20	1
2	10	0
2	5	0
2	2	1
	1	0

Hence, $(165)_{10} = (10100101)_2$

4. A number system is a way of representing numbers using specific digits or symbols. Each system has a base (radix) that defines how numbers are written. Common systems are decimal, binary, octal and hexadecimal.
5. To convert a decimal number to octal, follow these steps:

   Step 1 Divide the given decimal number by 8 and note the remainder.

   Step 2 Divide the quotient obtained from the previous step by 8, and note the new remainder.

   Step 3 Repeat the steps until the quotient becomes less than 8.

   Step 4 Write the remainders in reverse order, starting with the last remainder.

COMPETENCY-BASED QUESTIONS

1. Anshika can explain that the decimal system is base 10, which means it uses ten symbols (the digits 0 to 9). Since the base is 10, you don't need letters or special characters to write numbers. Each place value represents a power of 10, so 345 means 3 hundreds, 4 tens, and 5 ones.
2. The binary number $(110101)_2$ can be converted to decimal by expanding it in powers of 2:

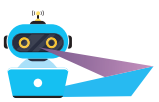
   $=1\times2^5 + 1\times2^4 + 0\times2^3 + 1\times2^2 + 0\times2^1 + 1\times2^0$

   $= 32 + 16 + 0 + 4 + 0 + 1$

   $= 53$

LAB LEARNING

Do it yourself.



CODE CHECK

Do it yourself.

Periodic Assessment-1

(Based on chapters 1 & 2)

A. 1. c 2. a 3. b 4. d

B. 1.

2	50	
2	25	0
2	12	1
2	6	0
2	3	0
	1	1

The binary equivalent of $(50)_{10}$ is $(110010)_2$.

2.

8	987	
8	123	3
8	15	3
	1	7

The octal equivalent of $(987)_{10}$ is $(1733)_8$.

C. 1.
```
  101011
- 11110
--------
  001101
```

2.
```
  1   111
  100101
+ 110111
--------
 1011100
```

3.
```
   101101
×      11
--------
   101101
+ 101101
--------
 10000111
```

4.
```
     11010
10 | 110101
   - 10
   ----
     10
   - 10
   ----
      010
    - 10
    ----
      01
```

C. 1. Internet of Things
2. Robotic Process Automation
3. Augmented Reality
4. Virtual Reality
5. Mixed Reality

3. Excel in Excel

A.	1. (i)	2. (i)	3. (ii)	4. (ii)	5. (ii)
B.	1. Constants	2. Plot Area	3. Valid	4. TODAY()	5. Clear
C.	1. T	2. F	3. F	4. T	5. T

D. 1. Conditional Formatting allows you to apply formatting (such as colours or styles) to cells automatically based on their values.

2. The differences between the SUM() and AVERAGE() functions are:
   - **SUM():** Adds a range of numbers. For example, =SUM(A1:A5) adds the values in cells A1 through A5.

- **AVERAGE():** Calculates the average (mean) of a range of numbers. For example, =AVERAGE(A1:A5) finds the average of the values in cells A1 through A5.

3. Two components of a chart are:
   - **Chart Area:** The entire space that holds the chart, including all elements.
   - **Chart Title:** A title that describes the chart, making it easier to understand the data.
4. A line chart shows data points connected by straight lines, making it useful for displaying trends over time. It's often used to track changes in data over continuous periods, such as months or years.
5. The different ways to enter formulas are:
   - **Directly into the cell:** Type the formula directly into the cell, starting with an equal sign. Press the Enter key to see the result.
   - **In the Formula Bar:** Select the cell and enter the formula in the Formula Bar, then press Enter to see the result.

COMPETENCY-BASED QUESTIONS

1. Fatima should use a column chart to highlight the relationship between sales in different regions.
2. Meera can use the CONCATENATE() function to combine the first and last names into one cell.

LAB LEARNING

Do it yourself.

CODE CHECK

Do it yourself.

4. Pictures to Posters with Canva

LEARNING LOGS

A.

1. (ii)	2. (ii)	3. (ii)	4. (iii)	5. (iv)

B. 1. Image editing 2. Sizes 3. Intensity 4. Auto Focus 5. Image settings

C.

1. F	2. F	3. F	4. T	5. T

D. 1. Image editing is the process of changing pictures to make them look better.

2. Three tools that appear after opening an image in Canva are: Crop, Adjust and Filters.

3. Filters can change the overall look of your image. They adjust things like the brightness, colours and contrast. When you apply a filter, it quickly changes your image to give it a new style or mood.

4. Cropping an image means cutting out parts of the image that you don't need, so you can focus on the important areas. This makes the image cleaner and more focused.

5. Effects are tools in Canva that give you control over how your image looks. You can add shadows, blur parts of the image, sharpen the main subject with Auto Focus or smoothen skin with Face Retouch.

COMPETENCY-BASED QUESTIONS

1. To add and edit the text box on his poster, Neitik should follow these steps:

   Step 1 Click on the Create design button.

   Step 2 Click on the Text tab.

   Step 3 Click on the Add a text box button.

   Step 4 Click inside the text box and type your desired text.

   Step 5 Adjust the desired font style, size, and colour using the options in the top toolbar.

2. To share a design, Divisha should follow these steps:

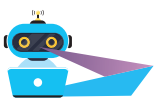
   Step 1 Click on the Share button.

   Step 2 Click on the drop-down arrow under the Access level section to set the access permissions.

   Step 3 Click on the Copy link button to finalise sharing.

LAB LEARNING

Do it yourself.



CODE CHECK

Do it Yourself.

5. Digital Presence

LEARNING LOGS

A. 1. (ii) 2. (i) 3. (ii) 4. (iii) 5. (iv)

B. 1. Privacy settings 2. Digital communication 3. Internet
4. Cyber Threats 5. Malware

C. 1. T 2. F 3. T 4. F 5. T

D. 1. To stay safe and healthy online, be aware of these risks:
- **Overuse of Technology:** Too much screen time can cause eye strain, sleep issues, and less physical activity.
- **Cyberbullying:** Hurtful online behaviour can damage self-esteem and relationships.

2. Cybersecurity is all about ensuring that your devices, data, and information are safe from online threats such as viruses, hackers, or phishing attacks.
3. Two tips for building a positive online persona are:
- **Share positivity:** Post kind, joyful, and helpful messages that show the best of your character.
- **Think first:** Ask yourself if your post reflects your true self and how others may see it.

4. When someone illegally accesses your accounts or devices. Use strong, unique passwords and enable two-factor authentication to increase security.
5. Two measures to stay safe from cyber threats are:
- **Privacy Control:** Review privacy settings on your accounts to ensure only trusted people can access your information.
- **Antivirus Protection:** Install antivirus software to detect and remove harmful viruses that can steal your data.

COMPETENCY-BASED QUESTIONS

1. Too much screen time can cause eye strain, sleep issues and less physical activity. Ravi can take regular screen breaks to protect your eyes and health.
2. Arush is most likely facing Spyware.

LAB LEARNING

Do it yourself.

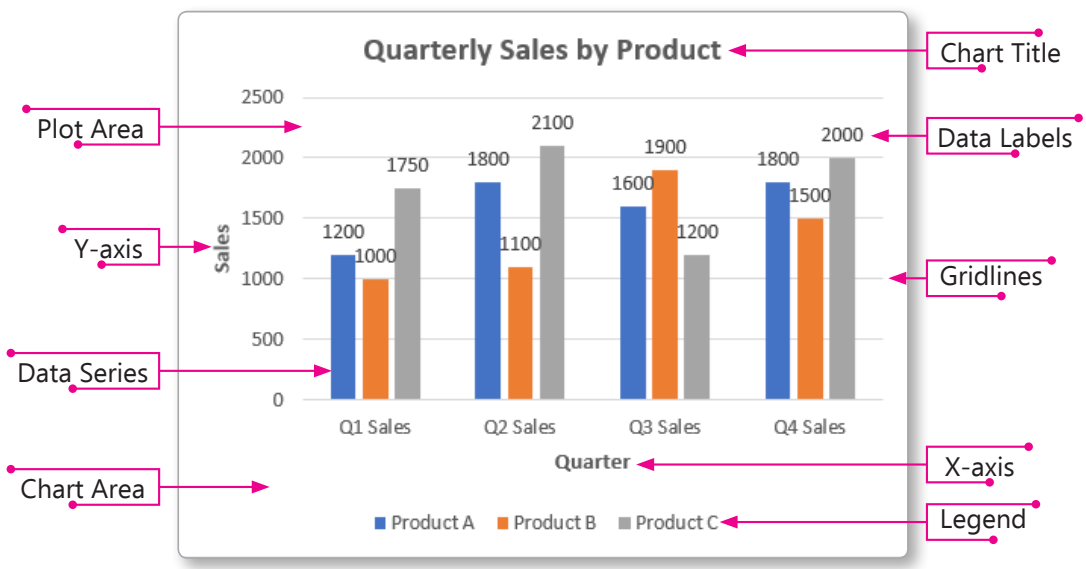
CODE CHECK

Do it yourself.

Periodic Assessment-2

(Based on chapters 3 to 5)

A.



B. 1. c 2. a 3. d 4. e 5. b

C.

1. Add new design or elements
2. Save or upload to the cloud
3. Resize the design
4. Add hyperlink to elements
5. Apply effects to elements

Test Sheet-1

(Based on chapters 1 to 5)

A. 1. (i) 2. (iii) 3. (iii) 4. (ii)
5. (ii) 6. (iii) 7. (i) 8. (ii)

B. 1. T 2. T 3. F 4. T
5. T 6. T 7. F 8. T

C. 1. Blocks 2. 16 3. Plot Area 4. Valid 5. Auto Focus
6. Intensity 7. Privacy settings 8. Digital communication

D. 1. Two tips for building a positive online persona are:

- **Share positivity:** Post kind, joyful, and helpful messages that show the best of your character.
- **Think first:** Ask yourself if your post reflects your true self and how others may see it.

2. Effects are tools in Canva that give you control over how your image looks. You can add shadows, blur parts of the image, sharpen the main subject with Auto Focus, or smoothen skin with Face Retouch.
3. Two components of a chart are:
   - **Chart Area:** The entire space that holds the chart, including all elements.
   - **Chart Title:** A title that describes the chart, making it easier to understand the data.
4. A line chart shows data points connected by straight lines, making it useful for displaying trends over time. It's often used to track changes in data over continuous periods, such as months or years.
5. A number system is a way of representing numbers using specific digits or symbols. Each system has a base (radix) that defines how numbers are written. Common systems are Decimal, Binary, Octal, and Hexadecimal.
6. To convert a decimal number to octal, follow these steps:
   Step 1 Divide the given decimal number by 8 and note the remainder.
   Step 2 Divide the quotient obtained from the previous step by 8, and note the remainder.
   Step 3 Repeat the steps until the quotient becomes less than 8.
   Step 4 Write the remainders in reverse order, starting with the last remainder.
7. Augmented Reality (AR) is a technology that adds digital information, like images, sounds or videos, to the real world. Virtual Reality (VR) creates an entirely digital environment that you can explore and interact with.
8. Cloud computing refers to the use of computing services—such as storage, processing power and software—available over the Internet. Two examples of cloud-based services are: Google Drive and Dropbox.

6. Problem Solving Simplified

LEARNING LOGS

A. 1. (ii) 2. (ii) 3. (ii) 4. (i) 5. (i)

B. 1. Accuracy 2. Recognition 3. Conditions 4. Quickly 5. Evaluation

B. 1. T 2. T 3. F 4. F 5. T

D. 1. To calculate the students different subjects marks use formula =SUM(B2+C2) in D2. In the same way the total score for other students can be calculated using Autofill.

2. Decomposition means breaking a big problem into smaller, more manageable tasks. For example, Create a 3D printed necklace. Instead of trying to design and print the entire necklace in one step, you break it down into smaller tasks.
3. Using a loop helps you save time and effort because you don't have to write the same instruction over and over again.
4. The If-Then-Else condition in an algorithm is used to make decisions. It checks whether a condition is true or false:
   - If the condition is true, the algorithm performs one set of instructions.
   - If the condition is false, it performs an alternative set of instructions.
5. Excel improves efficiency compared to manual calculations because It is quicker because the computer does the work for you.

COMPETENCY-BASED QUESTIONS

1. Muskan can decompose the task into the following steps:
   a. Research and Gather Information
   b. Organise the Information
   c. Create an Outline
   d. Write the Report
   e. Review and Edit
2. Rama's Condition to Check if a Number is Even or Odd:
   Rama would use the following condition to check if a number is even or odd:
   If the number modulus 2 equals to 0, then the number is even; otherwise, it is odd.
   The condition can be written as:

```
if (number % 2 == 0)
    print("Even")
else
print("Odd")
```

LAB LEARNING

Do it yourself.

CODE CHECK

Do it yourself.

7. Making Web Pages Alive

LEARNING LOGS

A.

1. (i)	2. (ii)	3. (iv)	4. (i)	5. (ii)

B.

1. MP3	2. OPACITY	3. CSS	4. ALT	5. SRC

C.

1. T	2. F	3. F	4. T	5. F

D.

1. <video> tag is used for inserting a video file in a web page.
2. **A:VISITED:** It is used to apply styles to visited links.

   A:ACTIVE: It is used to apply styles to an active link. A link becomes active when the user clicks on it.
3. **Internal linking** connects sections within a web page. For example, a table of contents with links at the top allows readers to jump to sections, bypassing the need to scroll.

   External linking connects your page to another, either on your local disk or the Internet. It directs visitors to additional resources on other sites, useful for sharing sources or references in blogs or research papers.
4.

```
<!DOCTYPE HTML>
<HTML>
<HEAD>
    <TITLE>USING AUDIO TAG</TITLE>
</HEAD>
<BODY>
    <H2>WHAT IS ARTIFICIAL INTELLIGENCE?</H2>
    <P>ARTIFICIAL INTELLIGENCE IS THE ABILITY OF MACHINES TO SIMULATE
    HUMAN INTELLIGENCE.</P>
    <AUDIO CONTROLS AUTOPLAY LOOP>
        <SOURCE SRC=”AI.MP3” TYPE=”AUDIO/MPEG”>
```

```
        YOUR BROWSER DOES NOT SUPPORT THE AUDIO ELEMENT.
    </AUDIO>
</BODY>
</HTML>
```

5. You can give rounded edges to an image using the CSS BORDER-RADIUS property.

```
<!DOCTYPE HTML>
<HTML>
<HEAD>
    <TITLE>FLAMINGO FACTS</TITLE>
</HEAD>
<BODY STYLE="BACKGROUND-COLOR: #F0F8FF;">
    <H1 STYLE="COLOR: #FF6347; TEXT-ALIGN: CENTER;">ALL ABOUT
    FLAMINGOS</H1>
    <H2 STYLE="COLOR: #4682B4; TEXT-ALIGN: CENTER;">THE GRACEFUL PINK
    BIRDS</H2>
    <!-- IMAGE WITH ROUNDED EDGES -->
    <IMG STYLE="BORDER: 5PX SOLID #FF6347; BORDER-RADIUS: 15PX;
    OPACITY: 0.7; WIDTH: 300PX;"
        SRC="BEAUTIFUL-FLAMINGOS-LAKE.JPG" ALT="FLAMINGO IMAGE">
    <P STYLE="COLOR: #2F4F4F; TEXT-ALIGN: CENTER;">
        FLAMINGOS ARE TALL, WADING BIRDS KNOWN FOR THEIR LONG LEGS,
        ELEGANT NECKS, AND DISTINCT PINK FEATHERS.
    </P>
</BODY>
</HTML>
```

COMPETENCY-BASED QUESTIONS

1. a. To set the size of the image "scream.png" to 250 pixels wide and 400 pixels tall using CSS.

```
<!DOCTYPE HTML>
<HTML>
<HEAD>
    <TITLE>WEB PAGE WITH IMAGES</TITLE>
    <STYLE>
        IMG.SCREAM {
            WIDTH: 250PX;
            HEIGHT: 400PX;
```

```
        }
    </STYLE>
</HEAD>
<BODY>
    <!-- IMAGE WITH DEFINED SIZE USING CSS -->
    <IMG SRC="SCREAM.PNG" ALT="SCREAM IMAGE" CLASS="SCREAM">
</BODY>
</HTML>
```

(b) To add an image "smiley.gif".

```
<!DOCTYPE HTML>
<HTML>
<HEAD>
    <TITLE>WEB PAGE WITH IMAGES</TITLE>
</HEAD>
<BODY>
    <!-- ADDING SMILEY.GIF IMAGE -->
    <IMG SRC="SMILEY.GIF" ALT="SMILEY IMAGE">
</BODY>
</HTML>
```

2. Ishaan needs internal linking. It connects sections within a web page.

LAB LEARNING

Do it yourself.

CODE CHECK

Do it yourself.

8. Lists and Tables in HTML5

LEARNING LOGS

A. 1. (iii) 2. (i) 3. (iv) 4. (ii) 5. (i)

B. 1. Unordered 2. Integer 3. <TR> 4. Caption
5. BORDER-WIDTH

C. 1. T 2. F 3. F 4. T 5. T

D. 1. A list is a collection of related items shown in pointed form. In HTML, lists present data in an organised and readable way. There are three types of lists: Ordered list, Unordered list and Description list.

2. It is a shorthand property for three CSS properties: LIST-STYLE-TYPE, LIST-STYLE-IMAGE and LIST-STYLE-POSITION.

3. The following are the advantages of using tables in HTML are:

   a. Tables allow you to summarise content in one of the easiest ways.

   b. They enable you to present data in a tabular format rather than in the default paragraph style.

4. CAPTION-SIDE property states the position of the table caption. It can be at the top or bottom.

   Syntax: CAPTION-SIDE: VALUE;

   For example: CAPTION-SIDE: BOTTOM;

5. **Padding:** The PADDING property sets space on all four sides in one declaration, using units like pixels or percentages.

   Width: The CSS WIDTH property specifies the width of the element's content area. 100% width will capture the complete width of the web page.

COMPETENCY-BASED QUESTIONS

1. Arun should use an unordered list for listing ingredients and an ordered list for listing the steps.
2. A restaurant should use <TABLE> tag along with <TH>, <TR> and <TD> to prepare menu card.

LAB LEARNING

Do it yourself.

CODE CHECK

Do it yourself.

Periodic Assessment-3

(Based on chapters 5 & 6)

A. 1.

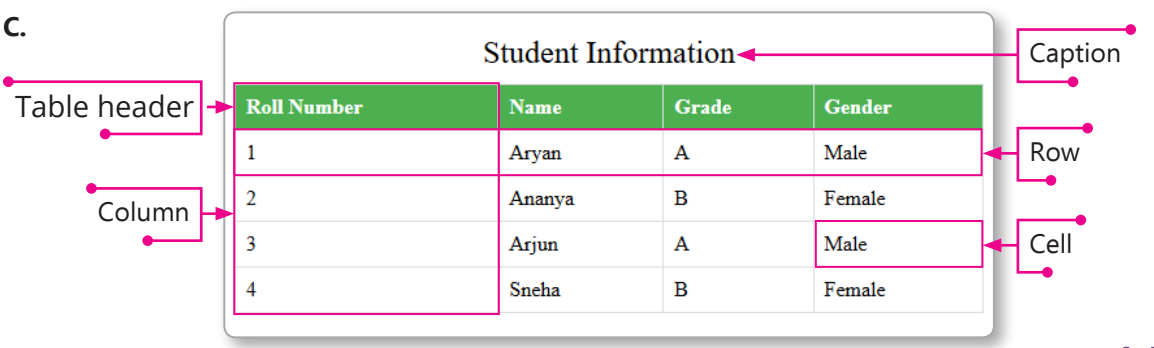
Step	Decimal No.	÷ 2	Quotient	Remainder
1	98	2	49	0
2	49	2	24	1
3	24	2	12	0
4	12	2	6	0
5	6	2	3	0
6	3	2	1	1

The Binary number of 98 is: 1100010

B.

```
<!DOCTYPE CSS>
<HTML>
<HEAD>
<TITLE>Human Organs</TITLE>
</HEAD>
<BODY STYLE="BACKGROUND-COLOR: #e6f7ff;">
<H1>TYPES OF COMPUTERS</H1>
<UL STYLE="LIST-STYLE-IMAGE: URL('green-check-mark-icon.png');">
<LI>LAPTOP</LI>
<LI>SMARTPHONE</LI>
<LI>TABLET</LI>
<LI>DESKTOP</LI>
</UL>
</BODY>
</HTML>
```

C.



9. Flow of Control in Python

LEARNING LOGS

A. 1. (iii) 2. (iii) 3. (ii) 4. (ii) 5. (ii)

B. 1. For 2. if...else 3. break 4. Iteration 5. Infinite

C. 1. T 2. T 3. F 4. F 5. T

D. 1. a. Syntax of if statement:

```
if (condition):
    Statement(s)
```

b. Syntax of if ... else ... statement:

```
if (condition):
    Statement block 1
    else:
    Statement block 2
```

2. The else block contains the code to execute when the condition in the if statement is False.
3. A for loop repeats a block of code a fixed number of times or over a sequence, while a while loop repeats as long as a condition is true.
4.
```
for i in range(5, 0, -1):
    print(i)
```
5. The nested if structure in Python allows you to place one if statement inside another. This means the program first checks a main condition, and if that condition is true, it checks another condition within it.

COMPETENCY-BASED QUESTIONS

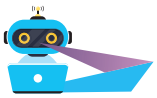
1. Sneha should use an if-elif-else control structure to classify the ages into different stages of life.
2. Amit should use the range:

```
for num in range(2, 13, 2):
    print(num)
```

This prints the first 6 even numbers: 2, 4, 6, 8, 10 and 12.

LAB LEARNING

Do it yourself.



CODE CHECK

Do it yourself.

10. Domains of AI

A. 1. (i) 2. (iii) 3. (iii) 4. (ii) 5. (i)

B. 1. Problem-solving 2. Chatbots 3. Data 4. Face recognition 5. Healthcare

C. 1. F 2. F 3. T 4. T 5. F

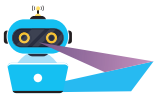
D.
1. The three domains of AI are Natural Language Processing, Data Science and Computer Vision.
2. Data refers to a collection of facts and information in various forms, such as numbers, text, sound, or images. It can be measured, collected, and analysed, often visualised with graphs.
3. Natural Language Processing (NLP) is a field of AI that focuses on the interaction between computers and human language, enabling machines to understand, interpret, and generate human language.
4. Computer Vision helps autonomous vehicles detect objects like traffic lights, pedestrians, and other vehicles, allowing the car to navigate safely without human intervention.
5. Structured data is organised in a specific format, making it easy to search and analyse, often found in relational databases. Unstructured data does not follow a specific format, including text documents, images and videos, requiring extra processing to organise and analyse.

COMPETENCY-BASED QUESTIONS

1. Madhu should use Data Science, as it helps in tracking data, identifying patterns, and making informed predictions.
2. Kavya should use Optical Character Recognition (OCR).

LAB LEARNING

Do it yourself.



CODE CHECK

Do it yourself.

11. Designing Circuits with Tinkercad

A. 1. (iii) 2. (ii) 3. (iv) 4. (i) 5. (iii)

B. 1. Send To 2. Breadboard 3. Microcontroller 4. Workplane
5. Jumper wires

C. 1. T 2. F 3. T 4. T 5. F

D. 1. A circuit is a pathway for electricity to flow. It is made up of different electrical components that are connected to allow electric current to pass through.

2. The three components of the Tinkercad circuit interface are: Component Library, Toolbar, and Workspace.

3. The photoresistor is used to detects whether the room is dark or bright. If it's dark, the lamp turns ON, and if it's bright, the lamp turns OFF. This makes the lamp smart and energy-efficient.

4.

Series circuit	Parallel circuit
In a series circuit, all components are connected in a single path.	A parallel circuit has multiple paths for electricity to flow.
The electricity flows through each component one by one.	Each component is connected to its own independent path.
If one component fails or is turned off, the entire circuit is interrupted.	If one component stops working, the others continue to function.
For example, if one bulb in Christmas lights goes out, all the lights turn off.	For example, in a house, if one light bulb burns out, the other lights stay on.

5. Two components of the Arduino UNO board are:

- **USB Connector:** The USB connector is a communication interface that allows data transmission between the Arduino and the host computer and supplies 5V power to the board.

- **Digital I/O Pins:** The digital I/O pins are used to read digital inputs or output HIGH/LOW signals.

COMPETENCY-BASED QUESTIONS

1. Vinay should use Arduino LilyPad if he is working on a wearable project.
2. Soumya should connect the LED in the circuit by placing the longer leg (anode, +) for the positive voltage and the shorter leg (cathode, -) for the negative voltage to correctly connect the LED.

LAB LEARNING

Do it yourself.

CODE CHECK

Do it yourself.

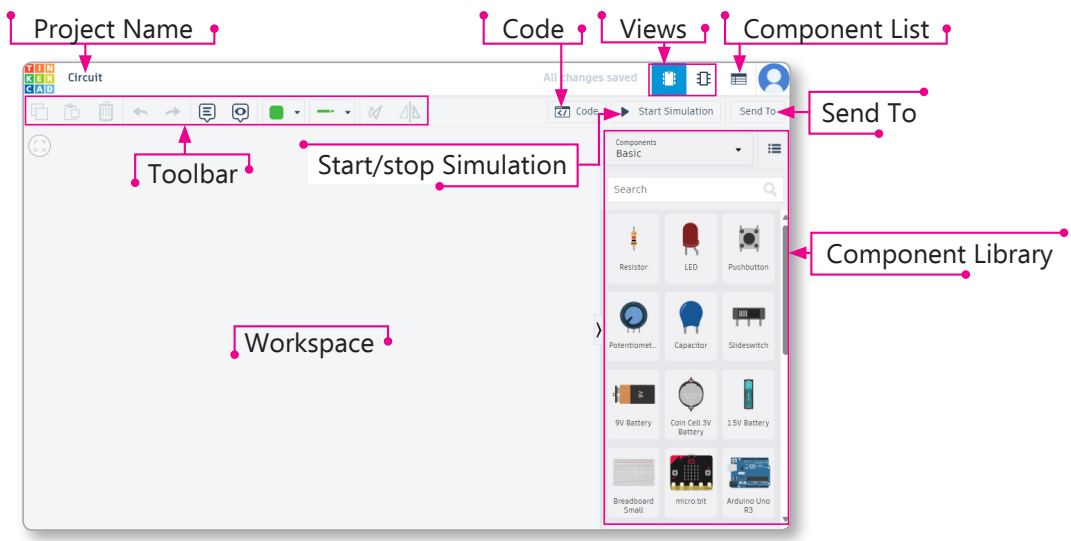
Periodic Assessment-4

(Based on chapters 9 to 11)

A.

```
Enter first number: 25
Enter second number: 45
The largest number is : 45
Enter a number: 6
The square of 6 is 36
```

B.



C. 1. Natural Language Processing
2. Machine Learning
3. Optical Character Recognition

Test Sheet-2

(Based on chapters 6 to 11)

A. 1. (ii) 2. (ii) 3. (i) 4. (ii) 5. (iii)
6. (i) 7. (iii) 8. (iii)

B. 1. T 2. F 3. F 4. F 5. F
6. T 7. T 8. T

C. 1. Jumper wires 2. Breadboard 3. Problem-solving 4. Iteration
5. Table Row 6. Integer 7. CSS 8. Quickly

D. 1. The If-Then-Else condition in an algorithm is used to make decisions. It checks whether a condition is true or false:

- If the condition is true, the algorithm performs one set of instructions.
- If the condition is false, it performs an alternative set of instructions.

2.
```
<!DOCTYPE HTML>
<HTML>
<HEAD>
    <TITLE>USING AUDIO TAG</TITLE>
</HEAD>
<BODY>
    <H2>WHAT IS ARTIFICIAL INTELLIGENCE?</H2>
    <P>ARTIFICIAL INTELLIGENCE IS THE ABILITY OF MACHINES TO SIMULATE
    HUMAN INTELLIGENCE.</P>
    <AUDIO CONTROLS AUTOPLAY LOOP>
        <SOURCE SRC="AI.MP3" TYPE="AUDIO/MPEG">
        YOUR BROWSER DOES NOT SUPPORT THE AUDIO ELEMENT.
    </AUDIO>
</BODY>
</HTML>
```

3. **Padding:** The PADDING property is used to specify the space around the content of a cell and the border of the cell in a table.

Width: The WIDTH property is used to specify the breadth of a box or table. 100% width will capture the complete width of the web page.

4. The following are the advantages of using tables in HTML are:
   - Tables allow you to summarise content in one of the easiest ways.
   - They enable you to present data in a tabular format rather than in the default paragraph style.
5. A for loop repeats a block of code a fixed number of times or over a sequence, while a while loop repeats as long as a condition is true.
6. The nested if structure in Python allows you to place one if statement inside another. This means the program first checks a main condition, and if that condition is true, it checks another condition within it.
7. The three domains of AI are Natural Language Processing, Data Science, and Computer Vision.
8. The three components of the Tinkercad circuit interface are: Component Library, Toolbar and Workspace.