ANSWER KEY

Touchpad PLUS Ver 2.0
Class-8

1. Computer Networking

LET'S PLUG-IN

1. Telephone   2. Social Media   3. Letter   4. Telegram

LET'S CATCH UP (Page no. 11)

1. Server   2. Internet   3. ISP   4. URL

LET'S CATCH UP (Page no. 18)

1. HTTPS- Hypertext Transfer Protocol Secure
2. IMAP- Internet Message Access Protocol
3. FTP- File Transfer Protocol
4. TCP/IP- Transmission Control Protocol/Internet Protocol

TEST YOUR SKILLS

1. a. (i)   b. (ii)   c. (iii)   d. (i)   e. (i)
2. a. protocol   b. SMTP   c. router   d. mesh   e. NIC
3. a. T   b. T   c. T   d. T   e. T
4. a. Protocol is a set of rules that governs the communication between the computers over a network.
   b. A client is a computer which depends on the server for all the resources.
      A server controls the access to the hardware and software on the network.
   c. Topology refers to the geometric arrangement of computers or nodes in a network.
   d. A gateway is a network device that allows to data to flow between two different networks which may use different protocols.
5. a. The computer network means a system of interconnected computers. The advantages of computer network are:
      (i) The information can be easily shared by the people.
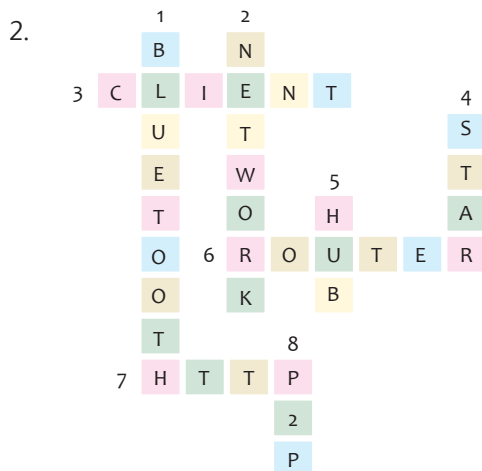   (ii) It helps in reducing the cost of hardware.

(iii) Store information on one centralised location.

(iv) Reliability implies backing up of information. If a system crashes, then the information is accessible on another workstation for future use.

(v) Reduction in installation cost.

(vi) User authentication process to secure the data.

(vii) People will have the accessibility to all the information they need to get and share through e-mails

b. LAN is a digital communication system that interconnects a larger number of computers and other peripheral devices within a radius of less than 1 km.

MAN consists of two or more local area networks or campus area networks together that usually spans several buildings in the same city or town.

c. Web page is a single digital page on the World Wide Web (WWW) that contains information and links of another pages is called a web page. Web pages are created by using the Hyper Text Markup Language (HTML).

A website is a collection of web pages which are interlinked to each other. A website may contains thousands of web pages.

FUN ZONE

LET'S SOLVE

1. a. Ring Topology b. Network Server

2.

LET'S EXPLORE

Do it yourself.

Do it yourself.

2. Introduction to Adobe Photoshop CC

Let's Plug-in

Do it yourself.

Let's Catch Up

1. Rectangular Marquee Tool
2. Elliptical Marquee Toll
3. Lasso Tool
4. Polygon Lasso Tool

Test Your Skills

1. a. (ii) b. (iii) c. (iv) d. (ii) e. (i)
2. a. advanced b. tiny dots c. .psd d. began
    e. Application
3. a. F b. T c. T d. T e. T
4. a. Pixels are the short for Picture Element. The computer screen comprises of tiny little dots. These tiny dots are known as pixels.
    b. The Paint Bucket Tool in Photoshop fills adjacent pixels that are similar in color in the image. It fills with either the selected foreground color or with a pattern.
    c. Rasterizing means the text will be converted into pixels, allowing you to make image adjustments that normally do not work with text layer. Rasterize is the process of converting a vector image to a raster image.
    d. Layers panel contains all the layers present in the Photoshop document. Whenever you add an image into a Photoshop document, a new layer is created.
    e. Layer is a transparent sheet stacked on top of each other.
5. a. Selection tools are used to select certain areas of the image to work without affecting the unselected areas. Some of the Selection tools are Rectangular Marquee Tool, Elliptical Marquee Tool and Lasso Tool
    b. Some of the blending brush combinations of the Mixer brush are Dry, Moist, Wet, Very Wet, etc. Follow the below steps to use the Mixer Brush Tool:
    Step 1: Open a new document and select the Mixer Brush Tool from the Tools panel.
    Step 2: Select the desired brush from the Brush Presets Picker in the Options bar.

Step 3: To sample a color either you can click on the Current brush load from the Options bar and select the desired color or press Alt key and click from where you wish to sample color in the current image.

Step 4: Set various options in the Options bar according to your preferences. Specifying the percentages of Wet, Load, Mix and Flow effects the outcome on the canvas.

Step 5: Click and drag the mouse on image to paint.

c. Slice Tool divides an image or layout into smaller sections called slices which can be exported and developed separately. This is mainly used for web publications. These small slices can be saved as a separate file and can be modified using the Save for Web command. The slices created manually are called user-slices. As we create user-slices, Photoshop automatically divides the rest of the area.

d. Quick Selection Tool makes a selection based on the color and contrast of the same color in the image that you wish to select. It remembers all the consecutive strokes. This way you can make different selections in a single image also. Quick selection tool is used to select a bigger area to work whereas the magic wand tool is used to work with a specific area. Hence Magic wand tool is better that the quick selection tool.

6. a. Background/Foreground   b. Horizontal Type tool

    c. Move tool

Fun Zone

Let's Solve

1.   a. Gradient Tool   b. Color Replacement Tool   c. Cut Tool

2.   a. Vertical Text Tool   b. Gradient Tool   c. Color Replacement Tool
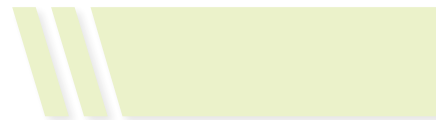
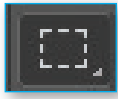   d. Elliptical Marquee   e. Crop Tool

Let's Explore

Do it yourself.

Tech Practice

Do it yourself.

3. More on Adobe Photoshop CC

Rectangular Marquee Tool

Quick Selection Tool

Crop Tool

Slice Tool

LET'S CATCH UP

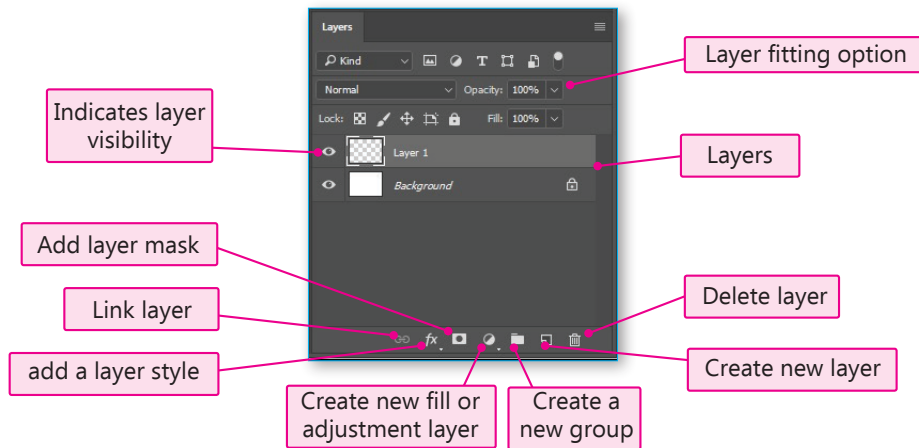1. Hand Tool
2. Rotate View Table
3. Rectangle Tool
4. Zoom Tool
5. Ellipse Tool
4. Line Tool

TEST YOUR SKILLS

1. a. (iii)   b. (ii)   c. (ii)   d. (i)
2. a. Background   b. Info   c. Red Eye   d. Sharpen
3. a. F   b. F   c. F   d. T
4. a. Copy and Paste

   b. A Ruler Tool is a handy tool that you can use to measure and draw outlines in any direction.

   c. Blur Tool makes the image hazy or softens the pixels of an image. It helps to highlight the main object in the image.

5. a. The various options of the Image menu are as follows:

   (i) **Adjustments:** It allows you to access various tools for changing the brightness, contrast, levels, exposure, vibrancy, hue/saturation, and color balance of an image.

   (ii) **Canvas Size:** It allows you to change the width and height of the whole working area according to your requirement.

   (iii) **Reveal All:** It expands the canvas as large as necessary to reveal full image when an image been moved beyond the canvas boundary.

   (iv) **Apply Image:** It allows you to apply a Blend Mode to the layer. It opens a dialog box with Source and Target tabs. From the Source tab, you can choose a layer on which blend modes will be applied. From the Target tab, you can select different blend modes to apply.

b. Spot Healing Brush Tool is also known as texture replacement tool because it blends the wrong or bad texture of one area in an image with the good or fine texture area of the same image. The result of the spot removal may vary depending on the complexity of the image. It can be used to remove the acne or skin blemishes and scars completely from an image.

c. Steps to draw a straight path segment are:

Step 1: Create a new document in Photoshop or open an existing image.

Step 2: Select the Pen Tool to from the Tools panel and set the mode of the Pen Tool to Path from the Options bar.

Step 3: Click on a point to start the path.

Step 4: Press the Shift key and click on the next point to draw a straight path.

Step 5: To close the shape, return to the first point and click once when the small circle appears.

FUN ZONE

LET'S SOLVE

1. a. History Brush Tool   b. Horizontal Type Tool
2. a. Layers Panel   b. Eraser Tool   c. Hand Tool   d. Blur Tool
    e. Magic Wand Tool

LET'S EXPLORE

Do it yourself.

TECH PRACTICE

Do it yourself.

Periodic Assessment–1

(Based on chapters 1 to 3)

A. 1. Ring   2. Tree   3. Bus   4. Star
B. 1. e.   2. d.   3. a.   4. c.   5. b.

C.

4. Lists and Tables in HTML

Do it your self

LET'S CATCH UP

A. An ordered list is used to display the items in sequential manner. Whereas, an unordered list is used to display random items which never require to place in a sequential manner.

B. 1. BORDER   2. FRAMES   3. BACKGROUND   4. BGCOLOR

TEST YOUR SKILLS

1. a. (iii)   b. (i)   c. (iii)   d. (iv)   e. (ii)

2. a. F   b. F   c. F   d. F   e. T

3. a. ordered list   b. list item   c. <UL>   d. disc

   e. <CAPTION>

4. a. A list is a collection of related items.

   b. Table represents data in the form of rows and columns.

   c. The description list is a type of list in which terms with their definitions are displayed.

5. a. The main difference between ordered list and unordered list is that the ordered list displays the items in a sequential manner and unordered list displays items in an non-sequential manner.

b. The attributes of the <TABLE> tag are BORDER, BORDERCOLOR, FRAMES, BGCOLOR, BACKGROUND, HEIGHT, WIDTH, CELLSPACING and CELLPADDING.

c. The ROWSPAN attribute applies when a single cell is extended for more than a single row and the COLSPAN attribute applies when a single cell is extended to more than a single column.

FUN ZONE

LET'S SOLVE

1.

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

2. a. <OL> tag   b. <TABLE> tag   c. COLSPAN

LET'S EXPLORE

Do it yourself.

TECH PRACTICE

Do it yourself.

5. Images, Links and Frames in HTML

LET'S PLUG-IN

Do it yourself.

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

TEST YOUR SKILLS

1.   a. (ii)   b. (iii)   c. (iii)   d. (iii)   e. (ii)
2.   a. F   b. F   c. F   d. T   e. F
3.   a. internal link   b. <A>   c. DIRECTION   d. <FRAMESET>   e. <NAME>
4.   a. HREF stands for Hypertext Reference.
     b. ALINK attribute is used to set the color of the active link.
     c. Frames are the different sections or parts of a web page.
     d. BORDER specifies the thickness of the border surrounding the image.
     e. The ROWS attribute of the <TABLE> tag is used to divide the window horizontally.
5.   a.   (i) The SCROLLAMOUNT attribute is used to specify the speed of the moving object in a marquee.
         (ii) The HREF means Hyperlink Reference which gives reference to the address of the web page.
        (iii) The ALT attribute specifies the alternate text to be displayed in the web browser, if the provided image is not found.
     b.   1. SRC attributes: It specifies the source or URL of the image that has to be inserted in the web page. For example, <IMG SRC="C:/Mydocuments/lily.jpg">
          2. ALIGN attribute: It aligns the image with respect to the text placed adjacent to the image. Image can be aligned left, right, middle, bottom and top. For example,
              <IMG SRC="lily.jpg" ALIGN="right">
     c. The attributes of the <FRAME> tag are:
          (i) FRAMEBORDER: This attribute is used to define whether a border is to be created around the frame or not.
         (ii) NORESIZE: This attribute is used to restrict the user to resize the frame on the web page.
        (iii) SRC: This attribute is used to define the URL or path of the web page which is to be linked to the frame.
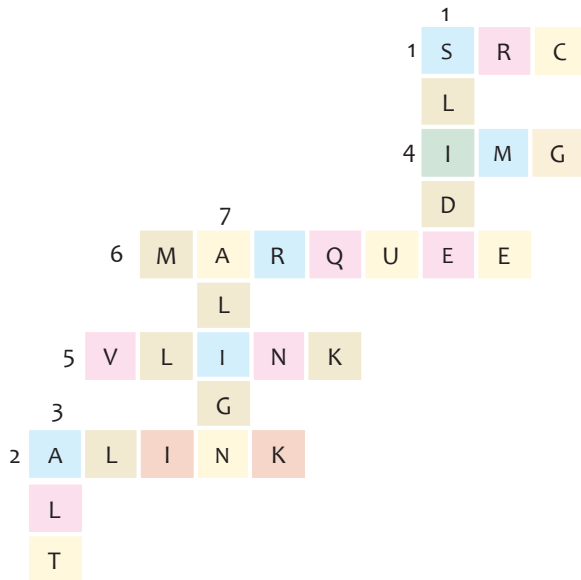
FUN ZONE

LET'S SOLVE

1.   a. <FRAMESET> tag

b. Yes, by using <MARQUEE> tag

c. <IMG> tag

2.

```
              1
           1  S  R  C
              L
           4  I  M  G
              D
        7
     6  M  A  R  Q  U  E  E
           L
     5  V  L  I  N  K
     3     G
  2  A  L  I  N  K
     L
     T
```

![Tech Practice]

Do it yourself.

Periodic Assessment–2

(Based on chapters 4 & 5)

A. 1. It is used to devide the window into vertical sections.

2. It is used to define whether a border is to be created around the frame or not.

3. It is used to ristrict the user to resize the frame on web page.

4. It is used to set the color of the active link.

5. It is used to set the color of the visited link.]

6. It is used to specify the place in which the linked web page will open.

B. <!DOCTYPE html>
<html>
<head>
<style>
table {
  font-family: arial, sans-serif;
  border-collapse: collapse;
  width: 100%;
}
}

```
td, th {
  border: 1px solid #dddddd;
  text-align: left;
  padding: 8px;
  }
  th { text-align: center};
}
</style>
</head>
body>
<h2>HTML Table</h2>
<table>
<tr style = "background-color: cyan">
<th colspan="3"> Permanent Gases of the Atmosphere </th>
  <tr style = "background-color: cyan">
    <th>Constituent</th>
    <th>Percent by Volume</th>
    <th>Concentration</th>
  </tr>
  <tr>
<td>Nitrogen</td>
    <td>78.084</td>
    <td>780,840.00</td>
  </tr>
  <tr>
    <td>Oxygen</td>
    <td>20.986</td>
    <td>209,460.00</td>
  </tr>
    <tr>
    <td>Argon</td>
    <td>0.934</td>
    <td>9340.00</td>
  </tr>
  <tr>
    <td>Carbon Dioxide</td>
    <td>0.036</td>
    <td>360</td>
  </tr>
  <tr>
    <td>Neon</td>
    <td>0.00182</td>
    <td>18.2</td>
  </tr>
  <tr>
    <td>Helium</td>
    <td>0.000524</td>
    <td>5.24</td>
```

```
    </tr>
    <tr>
      <td>Krypton</td>
      <td>0.000114</td>
      <td>1.14</td>
    </tr>
    <tr>
      <td>Hydrogen</td>
      <td>0.00005</td>
      <td>0.5</td>
    </tr>
  </table>
  </body>
  </html>
```

Test Sheet–1

(Based on chapters 1 to 5)

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

B. 1. internal link   2. <UL>   3. Eyedropper   4. End   5. Router
      6. NIC

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

D. 1. HREF stands for Hypertext Reference.

   2. The description list is created by using the <DL> tag in conjunction with <DD> and <dt> tags.

   3. A Ruler Tool is a handy tool that you can use to measure and draw outlines in any direction.

   4. Rasterizing means the text will be converted into pixels, allowing you to make image adjustments that normally do not work with text layer. Rasterize is the process of converting a vector image to a raster image.

   5. There are mainly five components of a network which are as follows:
      • **Sender:** A sender is a computer that wants to send information to other computer connected to the network.
      • **Receiver:** A receiver is a computer which is expecting the data from other computer on the network.
      • **Transmission Medium:** A transmission medium is a communication channel through which information is transferred from one computer to another on a network.
      • **Message:** A message is the information or data which needs to be transferred from one computer to another.
      • **Protocol:** A protocol is a set of standard rules used for communication.

   6. An Internet Protocol (IP) address is an unique identification number assigned to a computer connected to a network. It has two main functions: host or network interface identification and location addressing. IP addresses are written and displayed in human-readable notations, such as 172.16.254.1.

E. 1. <A HREF = "Display.html"> Display </A>

2. The ROWSPAN attribute applies when a single cell is extended for more than a single row and the COLSPAN attribute applies when a single cell is extended to more than a single column.

3. **Adjustments:** It allows you to access various tools for changing the brightness, con-trast, levels, exposure, vibrance, hue/saturation, and color balance of an image.

   Auto Tone: It automatically adjusts the black point and white point in an image.

   Auto Contrast: It adjusts image contrast automatically.

   Auto Color: It adjusts the contrast and color of an image.

4. Slice Tool divides an image or layout into smaller sections called slices which can be exported and developed separately. This is mainly used for web publications. These small slices can be saved as a separate file and can be modified using the Save for Web command. The slices created manually are called user-slices. As we create user-slices, Photoshop automatically divides the rest of the area.

5. A LAN is a digital communication system that interconnects a larger number of computers and other peripheral devices within a radius of less than 1 km.

   MAN consists of two or more local area networks or campus area networks together that usually spans several buildings in the same city or town.

6. Python—Loop and Functions

LET'S PLUG-IN

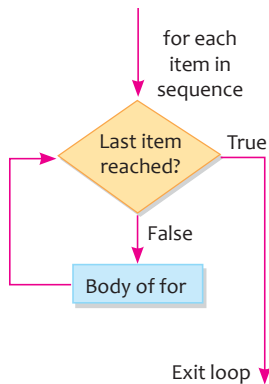1. F   2. T   3. T

LET'S CATCH UP

Hello Touchpad

TEST YOUR SKILLS

1. a. (iii)   b. (i)   c. (i)   d. (i)   e. (iii)

2. a. inbuilt   b. white   c. non-zero   d. infinite

   e. break, continue

3. a. F   b. F   c. F   d. F   e. T

4. a. Looping refers to the process of repeating a set of statements repeatedly on the basis of a condition until the condition is falsified.

   b. The syntax of for loop is
      for <variable> in <iterator>:
      Statements

c. A function is a block of organized and reusable code used to perform a single or related action.

5   a.

for each
item in
sequence

↓

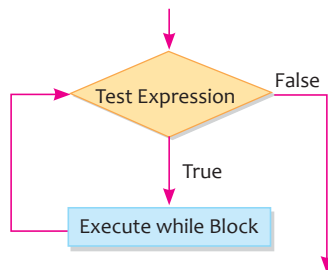Last item reached?   True

False

↓

Body of for

Exit loop

b. The while statement executes a set of statements repeatedly, until the logical expression evaluates to true. When the condition becomes false, the control comes out of the loop. The syntax of while statement is given below.

Syntax:

while (test expression):

Statements

Test Expression   False

True

↓

Execute while Block

c. The break is a keyword in Python which is used for bringing the program control out of the loop. When a continue statement is encountered inside a loop, control of the program jumps to the beginning of the loop for next iteration, skipping the execution of rest of the statements of the loop.

FUN ZONE

LET'S SOLVE

1. 55
2. apple
   banana
   cherry

3. 2

    4

4. 0

    0

    1

    0

    2

5. 0

    1

    2

    0

LET'S EXPLORE

Do it yourself.

TECH PRACTICE

1. num = int(input("Enter a number: "))
    sum = 0
    temp = num
    while temp > 0:
       digit = temp % 10
       sum += digit ** 3
       temp //= 10
    if num == sum:
       print(num,"is an Armstrong number")
    else:
       print(num,"is not an Armstrong number")

2. i = 0
    for i in range(8, 90, 3):
        print(i)

3. i = 0
    for i in range(100, 1, -2):
        print(i)

4. i = 0
    while (i <= 100):
        i = i+1
        print(i)

5.
```
i = 0
a = 0
while ( i < 100):
    i += 1
    a = i+a
print(a)
```
6. Using While loop
```
i = 0
a = 0
b = 0
while ( i < 10):
    a = a + 2
    b = b + a
    i = i + 1
print(b)
```
Using For loop
```
a = 0
for i in range(1, 11):
    a = a + i
print(a)
```
7.
```
i = 0
a = 1
b = 0
while(i < 20):
    a = a + 2
    i = i + 1
    b = b + a
print(b)
```

7. Computer Safety and Security

LET'S PLUG-IN

Do it yourself.

◉ Let's Catch Up

A 1. Cleaning the keyboard   2. Cleaning the Mouse

    3. Cleaning the Monitor

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

Test Your Skills

1.   a. (iii)   b. (ii)   c. (ii)

2.   a. malware   b. biometric   c. decryption   d. zombie

3.   a. Authentication is the process of verifying a user's identity before granting him or her access to a computer system.

     b. Trojan horse is a type of malware. It conceals itself inside the software that seems legitimate.

     c. An antivirus program is used to detect the presence of a virus on a computer and remove the virus.

4.   a.   • Delete files: If you have unwanted files, you can delete them manually and move them into the Recycle Bin, then empty the Recycle Bin.

         • Disk Defragmenter: Windows includes a Disk Defragmenter program in the Control Panel. It scans the files of your hard disk drive and rearranges them to free-up space. If your computer is working slowly, running Disk Defragmenter can help to speed it up.

         • Disk Cleanup: Windows also includes a Disk Cleanup program in the Control Panel. It scans your computer for temporary files and other files that can be deleted. You can then delete the files to free up space on your hard disk drive.

     b. Malware is a malicious software. It refers to software programs designed to damage or carryout other unwanted actions on a computer system. In Spanish, 'mal' is a prefix that means 'bad,' making the term 'badware,' which is a good way to remember it.

       The different types of malware are virus, worm, trojan horse, spyware, zombies, ramsomware, rootkit and backdoor.

     c. A computer virus is a 'piece of code' or program developed to corrupt the data or program files stored on the computer system. It enters to the computer without permission of the user. The user of the computer may not even realise that the computer is affected by a virus.

       Whereas, A computer worm is a type of malware that has the capability to replicate itself without any human interaction. It consumes lots of memory space in replication. Once a computer has been infected by a worm, its processing speed gets slow-down, works unexpectedly and halts other tasks.

Fun Zone

Let's Solve

1.   a. Virus   b. Trojon   c. Rootkit

2. a. Password protection.

    b. Take a backup of original data.

    c. His computer is infected by a virus.

LET'S EXPLORE

Do it yourself.

TECH PRACTICE

Do it yourself.

Periodic Assessment–3

(Based on chapters 6 & 7)

A.
```
num = 407
if num > 1:
   # check for factors
   for i in range(2,num):
      if (num % i) == 0:
          print(num,"is not a prime number")
          print(i,"times",num//i,"is",num)
          break
   else:
       print(num,"is a prime number")
# if input number is less than
# or equal to 1, it is not prime
else:
   print(num,"is not a prime number")
```

B.
```
num = int(input("Enter a number: "))
factorial = 1
if num < 0:
   print("Sorry, factorial does not exist for negative numbers")
elif num == 0:
   print("The factorial of 0 is 1")
else:
   for i in range(1,num + 1):
       factorial = factorial*i
   print("The factorial of",num,"is",factorial)
```

C. 1. Rootkit is a malware that gains administrator access to the host system. Once the attacker gains access to the system, the rootkit gets hidden but retains special access to the system. The detection of rootkit is difficult as having special access to the system, it bypasses the tracking software.

2. Backdoor is a type of malicious software which enters into the computer through bundled with other software or files. It is used to gain remote access to the host computer.

3. The term 'firewall' originally referred to a wall intended to confine a fire or potential fire within a building. In computer, a firewall is a software or hardware-based network security system that controls the incoming and outgoing network traffic based on applied rule set. A firewall acts like a gatekeeper and prevents unauthorised access to a computer network. It inspects every data packet that arrives at a network and decides, on the basis of a set of predefined rules whether to pass or not. Firewall establishes a barrier between a trusted, secure internal network and another network (for example, the Internet) that is not assumed to be secure and trusted.

8. Google Apps

Facebook   WhatsApp   Twitter   Instagram

LET'S CATCH UP

A. 1. Gmail   2. Google Maps   3. Google Drive   4. YouTube

B. Yes Google Slides are different from the MS PowerPoint. You need to have a license to use MS Powerpoint on any device, whereas you don't need any license to work on Google slides.

TEST YOUR SKILLS

1. a. (iii)   b. (i)   c. (ii)   d. (i)   e. (iii)

2. a. Sundar Pichai   b. encryption   c. share   d. Map, Satellite, Terrain

   e. saved

3. a. Google Drive is a cloud-based storage service. With Google Drive, multiple users can access a single file at the same time, at different locations and from different devices.

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

   c. Google Maps is a digital navigation program that provides detailed information about the geographical regions of any particular area. Google Map was launched on February 8, 2005.

   d. Google mail or Gmail is one of the best and free mailing apps accessible through a web browser over the Internet.

   e. Google Docs is a free online word processing program. It is similar to Microsoft Word.

4. a. Follow the below steps to open Google Docs:

   Step 1: Click on the Google apps button.

   Step 2: Click on the Docs icon from the drop-down menu. The Start a new document page appears.

   Step 3: Click on the Blank template.

b. Some of the features of YouTube are:

    (i) Users can search for any particular keyword and watch videos

    (ii) Create a personal YouTube channel.

    (iii) Upload videos to your channel.

    (iv) Like/Comment/share other YouTube videos.

    (v) Users can subscribe/follow other YouTube channels and users.

c. YouTube is the most widely used video sharing application where users can upload their videos, share, comment, watch and like other videos.

Views on YouTube are: Do it yourself.

d. Google introduced Google Sheets, a spreadsheet application on March 9, 2006. It works like any other spreadsheet tool, but since it is an online app, it offers much more than just the spreadsheet tools.

Perform the following steps to share a spreadsheet:

Step 1: Click on the Share button from the top-right corner of the spreadsheet.

Step 2: Enter the email address(es) of the people with whom you want to share the spreadsheet in the box.

Step 3: Assign permission levels by clicking on the Settings button.

Step 4: Click on the status of the receiver.

Step 5: Type a message for the receiver in the Message box.

Step 6: Click on the Send button to share the file.

Perform the following steps to protect a spreadsheet:

Step 1: Select the data you would like to protect or choose Range or Sheet, to protect an entire sheet.

Step 2: Click on Set permissions button.

FUN ZONE

LET'S SOLVE

1.   a. View button
       b. Google Maps

2.   a. Google Slides   b. YouTube   c. Google Sheets   d. Broadcast yourself
       e. Google Docs   f. Google Drive   g. Gmail   h. Map view
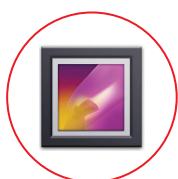   i. Google

9. App Development

LET'S CATCH UP

TEST YOUR SKILLS

1.	a. (i)	b. (i)	c. (i)	d. (i)	e. (iii)
2.	a. F	b. T	c. F	d. T	e. T
3.	a. hybrid	b. Mobile	c. Android	d. gaming	e. install

4. a. An app is a software program primarily developed for hand-held smart devices such as mobile and tablet.

   b. Web apps are actually web applications which give a user with experience similar to native apps.

   c. Native apps are the type of Mobile apps. These are platform dependent which means that these apps are primarily developed for a specific platform.

   d. E-commerce apps allow us to buy or sell products while sitting at home or any other place.

5. a. Mobile apps is gamming apps which shared more than 24% area of the app store. The most commonly used gaming apps are PUBG, Candy Crush Saga, and Angry Birds.

Productivity apps, also known as business apps used by businessmen to perform several complex tasks. The most commonly used productive apps are Google Calendar, Evernote and Dropbox.

Entertainment apps are developed to entertain the people. The most commonly used entertainment apps are Netflix, Talking Tom and YouTube.

b. Web apps are actually web applications which give a user with experience similar to native apps. These apps are not deployed on the app store.

Some of the examples of the Web apps are OLX, Flipkart and Pinterest.

Native apps are platform dependent which means that these apps are primarily developed for a specific platform. Some of the examples of native apps are Camera, Microphone, Gallery and Address book.

c. The difference between web app and website is that a web app can be a small part of a website which provides a particular functionality. On the other hand, a website can contain many web apps.

d. Educational apps provide a platform for children to learn from anywhere and anytime. These apps use advance methodologies and new concepts to make the learning easier. The most commonly used educational apps are Khan Academy, Vedantu, and Grammar EN.

FUN ZONE

LET'S SOLVE

1. a. Gaming   b. Music Player

2. a. Mobile apps   b. Google Playstore   c. iOS   d. Web application
    e. App Store   f. Hybrid app   g. Gaming app   h. Educational app
    i. Social networking apps   j. Web apps

LET'S EXPLORE

Do it yourself.

TECH PRACTICE

Do it yourself.

10. Latest Technological Developments

LET'S PLUG-IN

1. TECHNOLOGY   2. INTELLIGENT

1. Natural Language Processing
2. Intelligent agent
3. Pattern Recognition

TEST YOUR SKILLS

1. a. (iii)   b. (ii)   c. (i)   d. (i)   e. (ii)

2. a. Augmented Reality   b. RPA   c. Shakey   d. Virtual

   e. RP

3. a. F   b. T   c. F   d. T   e. F

4. a. AI is the branch of computer science that aims at creating expert and intelligent computer systems which simulate certain human qualities such as, learning, reasoning, communicating, seeing, hearing, and sensation.

   b. Pattern Recognition software comprises of a camera and software which together identify repetitive patterns and establish connections between the patterns stored in the database and the perceived patterns. Facial recognition software, video surveillance cameras, fingerprint identification and automatic voice recognition software are some examples of pattern recognition software.

   c. Rapid prototyping is used to create models to quickly test a new product before mass production. 3D Printing can be termed as a RP method.

   d. RPA refers to the process of automating certain tasks in an industry through the use of robots. The purpose of RPA is to transfer the execution of the process from humans to robots. Robotic automation uses the existing IT structure without using any complex system integrations.

   e. Intelligent Apps are software written for mobile devices based on artificial intelligence and machine learning technology, aimed at making everyday tasks easier.

5. a. (i) Expert system can be defined as a communicating computer program that can solve problems which would otherwise require human assistance. These programs replicate the reasoning process of experts in certain areas. For example, PROSPECTOR

   (ii) Natural Language processing is the study of methods by which computers can recognize and understand spoken or written human language. Speech recognition software are an example of NLP where computers translate spoken speech into text.

   (iii) Intelligent agents is a type of computer program that has built-in intelligence which keeps a check on the work patterns, asks questions and performs tasks on the behalf of the user. The simplest example of intelligent agents is surfing the Internet.

   (iv) Augmented Reality is the blending of Virtual Reality and real life. AR is using technology to superimpose information such as sounds, images and text on the real world that we can see. Images are created by developers within applications that blend in with content in the real world. AR users can interact with virtual content in the real world and can also distinguish between virtual and real content.

(v) Virtual Reality refers to a virtual world that the user can interact with. While in VR, the user cannot easily distinguish between what is real and what is virtual. VR provides a total immersive experience to the user. These technologies find the greatest use in entertainment, sports/gaming, close interactive eye to eye communication and aided shopping experiences. Some examples are, Oculus Rift and Google cardboard.

b. Applications of AR are:

1. SixthSense device
2. Google Glass
3. Star Walk
4. Coloring book

Applications of VR are:

1. Oculus Rift
2. VR in education
3. VR in medical

c. It is a system of connected computing devices, mechanical and digital machines for creating a virtual network where a monitoring center ensures that everything is working smoothly. Each connected device has a unique identifier and can transfer data over the network without any human intervention. The connected devices gather and share data about their usage and their operative environment. The devices can be your smartphones, refrigerators, televisions, washing machines, etc.

d. The applications of 3D Printing are:

1. Education
2. Rapid Prototyping (RP)]
3. Medicines
4. Construction
5. Art and Jewelry

e. AR stands for Augmented Reality, in this technology virtual objects are created and visualized alongside with real life objects. Whereas VR or Virtual Reality is completely virtual yet it feels real. While using the AR tech, you can partially see the real world, whereas the VR tech completely cuts you off from the real world. It takes you to a virtual world where everything is just a simulation.

FUN ZONE

LET'S SOLVE

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

Do it yourself.

Do it yourself.

Periodic Assessment–4

(Based on chapters 8 to 10)

A. 1. Gallery   2. Flipkart   3. Gmail

B. 1. Candy Crush 2. Dropbox   3. Netflix

C. 1. Aurgumented Reality   2. Virtual Reality
     3. Global Positioning System   4. Natural Language Processing
     5. Portable Document Format

D. 1. Thumbs Up   2. Google Sheets
     3. Google Maps   4. Thumbs Down

Test Sheet–2

(Based on chapters 6 to 10)

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

     6. (i)   7. (iii)   8. (i)   9. (i)

B. 1. hybrid   2. install   3. in-built   4. continue, break
     5. Augmented Reality   6 Satellite, Terrain, Street   7. saved

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

     6. T

D. 1. An app is a software program primarily developed for hand-held smart devices such as mobile and tablet.

   2. Looping refers to the process of repeating a set of statements repeatedly on the basis of a condition until the condition is falsified.

   3. Authentication is the process of verifying a user's identity before granting him or her access to a computer system.

   4. Google Docs is a free online word processing program. It is similar to Microsoft Word.

   5. Rapid prototyping is used to create models to quickly test a new product before mass production. 3D Printing can be termed as a RP method.

E. 1. Internet of Things is a system of connected computing devices, mechanical and digital machines for creating a virtual network where a monitoring center ensures that everything is working smoothly. Each connected device has a unique identifier and can transfer data over the network without any human intervention.

A lightbulb that can be switched on using a smartphone app, a motion sensor or a smart thermostat in your office or a connected streetlight are examples of IoT devices.

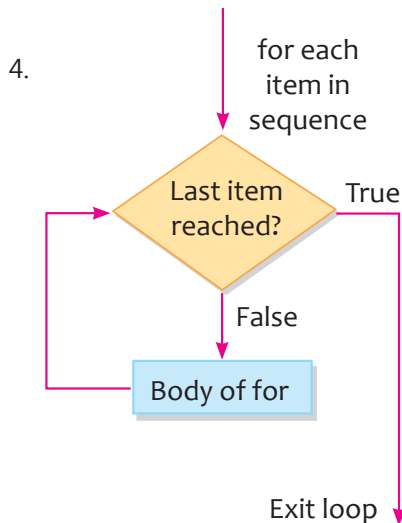2. Follow the below steps to open a document:

Step 1: Click on the Google apps button.

Step 2: Click on the Docs icon from the drop-down menu. The Start a new document page appears.

Step 3: Click on the Blank template.

3. Malware is a **malicious software**. It refers to software programs designed to damage or carryout other unwanted actions on a computer system. In Spanish, 'mal' is a prefix that means 'bad,' making the term 'badware,' which is a good way to remember it.

The different types of malware are virus, worm, trojan horse, spyware, zombies, ramsomware, rootkit and backdoor.

4.

5. Web apps are actually web applications which give a user with experience similar to native apps. These apps are not deployed on the app store.
Some of the examples of the Web apps are OLX, Flipkart and Pinterest.
Native apps are platform dependent which means that these apps are primarily developed for a specific platform. Some of the examples of native apps are Camera, Microphone, Gallery and Address book.

6. **By using while loop:**
```
limit = int(input(" Please Enter the limit Value : "))
Sum = 0
N = 1
while N <= limit:
```

```
    if(N % 2 == 0):
        print(N)
        Sum = Sum + N
    N = N + 1
print("The Sum of Even Numbers from 1 to", limit, "is: ",Sum)
```

By using for loop:

```
Sum = 0
limit = int(input(" Enter the last number of the range : "))
for even in range(1, limit+1):
    if(even % 2 == 0):
        print(even)
        Sum  = Sum + even
print("The Sum of the even numbers till", limit, "is: ", Sum)
```