

1. Advanced Features of Windows 10

EXERCISE



- A.** 1. a 2. a 3. a 4. d
- B.** 1. T 2. F 3. T 4. T
- C.** 1. Hardware and sound 2. Content 3. Partitions 4. Question mark
- D.** 1. File Explorer helps us organise and manage files and folders.
2. Asterisk (*) and Question mark (?)
3. To add new font, follow these steps:
- Step 1** Open Control Panel window and click on the Appearance and Personalization category. The subcategories of Appearance and Personalization category will appear.
- Step 2** Click on the Fonts subcategory.
- Step 3** All the available fonts will appear in the Fonts window. Open the folder containing new fonts which you want to add.
- Step 4** Drag the desired font and drop it into the Fonts window. Now, the new font is available to use.
- E.** 1. Asterisk is used to replace a string of characters in the search term. This implies that if we place an asterisk in our search term then Windows will search for a file name with the given characters and any other text string whereas Question mark replaces a single character or symbol. It represents only one character so it searches for only one character.
- For example, if we type 'comp*' then it searches for files or folders beginning with 'comp' and displays like 'computer', or 'company', or 'Compile' etc. but if we type C?M in the search box of the File Explorer then it will display only files or folders whose names begin with three characters in which first and third characters are C and M.
2. We need to use wildcard for searching when we can't find a file in the computer or if we don't know its location or complete name. Wildcard is a special character which is used to represent one or more characters. Generally, two wildcard characters are commonly used for searching files in a system. These are asterisk(*) and question mark (?).

3. List view displays your files and folders as small icons with their names in a list. By default, all the files and folders are visible in alphabetical order. In this view, it is very easy to find a file or folder whereas the Details view shows the information about files or folders like name, type, size, date of creation/modification, etc.

F. Appearance and Personalization

IN THE LAB

Do it yourself.

2. Charts in Excel

EXERCISE



- A.** 1. c 2. a 3. b 4. a
- B.** 1. Column chart 2. Legend 3. Scatter 4. Design
5. chart styles
- C.** 1. F 2. F 3. T 4. T
- D.** 1. A chart is an effective way to display data in a pictorial form. It makes it easier to draw comparison and analyse the growth, relationship and trends among the values in a table.
2. Data series is related to the set of values. It is represented by the bars or slices that represent the data values.
3. Area chart displays the quantitative magnitude of the data graphically.
4. Pie Chart is a circular chart divided into sectors where each sector shows the relative size of each value whereas Line Chart uses connecting dots to display trends over a period of time. It is used to show trends over a period of time.
- E.** 1. Three components of a chart are:
- (i) **Data Labels:** Data labels includes data values, category name, series name, legend keys and values from cells.
 - (ii) **X-axis:** X-axis is the horizontal axis of the chart. It is also called the category axis.
 - (iii) **Legend:** Legend is a key which shows the meanings of symbols and colours used in the chart.
2. • Column Chart displays the data in the form of vertical bars whereas bar chart displays the data in the form of horizontal bars.
- In column chart, categories are on the horizontal axis and the values are represented on the vertical axis. In bar chart, categories are represented on the vertical axis and values are represented on the horizontal axis.



3. To create a chart, follow the given steps:

Step 1 Select the range of cells.

Step 2 Click on the Insert Column or Bar Chart from Charts group under Insert tab.

Step 3 Select a 2-D Column Chart option from the drop-down list. A chart will be inserted in the Excel sheet.

F. Pie Chart

IN THE LAB

Do it yourself.

Periodic Assessment 1

(Based on chapters 1 & 2)

- A.**
1. It is usually used to display the data in the form of vertical bars. Column chart is used in cases like Sales comparison.
 2. It is a circular chart divided into sectors where each sector shows the relative size of each value. It always shows only one data series. Example of pie chart is survey results.
 3. It is used to display the quantitative magnitude of the data graphically. Area chart is used to show Stock Markets trends.
 4. The bar chart displays the data in the form of long rectangular rods also called bars. Bar chart is used to show Sales comparisons.
 5. Scatter charts also known as XY scatter plot charts. They show the correlations between the two sets of values.

- B.**
- | | | | | |
|----|-------------|----------|------------------|----------------------|
| 1. | Chart Area | Legend | Gridlines | Design |
| 2. | Line | Pie | Labels | Area |
| 3. | Small Icons | File | List | Tiles |
| 4. | Wildcard | Programs | Clock and Region | Network and Internet |

- C.**
- | | | | | |
|------|------|------|------|------|
| 1. c | 2. d | 3. b | 4. e | 5. a |
|------|------|------|------|------|

3. Using Tools in GIMP

EXERCISE



- A.** 1. c 2. b 3. c 4. a
- B.** 1. F 2. T 3. T 4. F
- C.** 1. Rectangle Select 2. Text 3. Sharpen 4. Clone
- D.** 1. Fuzzy Select tool is used to detect the edges of the image automatically on the basis of colour codes and do the selection quickly.
2. Retouching tools help you to add or remove objects from an image.
3. Smudge tool is used to show the image as the wet paint on the image has been spread by a finger.
- E.** 1. Paintbrush tool is used to draw brush strokes to give an effect of painting to the image. The Paintbrush tool shows various options. For example, Opacity option is used to increase or decrease the transparency of the brush color. To use Paintbrush Tool, follow the given steps:
- Step 1** Choose a colour for your paint brush by adjusting the gradient sliders.
- Step 2** Choose the type of Brush from the Brushes tab.
- Step 3** Click on the workspace and drag to draw the flow of brush.
2. To use Clone Tool, follow the given steps:
- Step 1** Open the image and then click on the Clone Tool icon in the Toolbox.
- Step 2** Select the brush size and hardness from Tool Options.
- Step 3** Press and hold the Ctrl key and click on the image to be cloned.
- Step 4** Click and drag the mouse at the place where the clone is to be created.
3. To use Blur tool, follow the given steps:
- Step 1** Open an image.
- Step 2** Click on the Blur Tool icon in the Toolbox or press Shift+U.
- Step 3** Select the brush size and hardness.
- Step 4** Click and drag the mouse pointer over the area that you want to blur.
- Step 5** Click on the Blur Tool icon in the Toolbox or press Shift+U.
4. Healing tool is used to repair dark spots, scratches etc. from the image.
- F.** She should use Fuzzy Select tool and Crop tool.

IN THE LAB

Do it yourself.



4. Advanced Features of GIMP

EXERCISE



- A.** 1. a 2. b 3. b 4. c
- B.** 1. F 2. F 3. F 4. T
- C.** 1. Eye 2. tab 3. copying, pasting 4. Filters
- D.** 1. Layers are used so that individual objects of an image can be edited without affecting other objects.
2. Layers are transparent sheets which are stacked on top of each other.
3. Filters are tools which are used to modify an image in a variety of ways.
4. Hiding a layer means to make the layer temporarily invisible. When a layer is hidden, its content is also hidden from the view.
5. To effectively combining all elements of the image into one.
- E.** 1. Flattening layers in GIMP merges all visible layers into a single layer, effectively combining all elements of the image into one. To flatten layers, follow the given steps:
- Step 1** Select a layer which you want to flatten.
- Step 2** Right click on the Layers palette and select Flatten Image option.
2. To delete a layer, follow the given steps:
- Step 1** Select a layer from the Layers palette.
- Step 2** Click on the Delete layer button.
3. To apply filter to an image, follow the given steps:
- Step 1** Open an image in GIMP.
- Step 2** Select the part of the image where you want to apply the filter.
- Step 3** Click on the Filters menu from the menu bar.
- Step 4** Choose Blur filter from this submenu.
- Step 5** Click on Gaussian Blur option.
- Step 6** Increase the value of the X and Y size to decrease or increase the effect of the filter.
- Step 7** After you have applied the suitable value to the filter, click on OK button to apply the effect.
- F.** 1. Layers 2. Merge two images

IN THE LAB

Do it yourself.

5. Safeguarding your Computer

EXERCISE



- A.** 1. b 2. b 3. d
- B.** 1. F 2. F 3. F 4. T 5. T
- C.** 1. Malware or malicious software is designed to cause harm to your system. A malware gets installed on a computer without approval from the computer's owner.
2. A computer virus is a program that is able to copy itself when it is run. It gets activated each time the program or file to which it is attached is opened or executed.
3. The two symptoms of an infected computer are:
1. Change the file names or types automatically.
 2. Start displaying unusual messages on the screen.
4. Ransomware encrypts files or locks users out of their systems and demands a ransom payment in exchange for decryption keys or access restoration.
- D.** 1. a. A trojan horse is a type of dangerous malware. It represents itself as helpful software programs. Once the user clicks on it to agree to run it, it gains access to sensitive data and then modifies, blocks, or deletes the data. It cannot copy itself from one computer to another.
- b. An adware tracks user's browser and download history and keeps popping advertisements on the screen.
2. We can protect our system from Malware attack, with the given points:
1. Download only legal software.
 2. Use the original version of windows.
 3. Scan Pen drive, CD and any other external storage device for viruses before opening in computer.
- E.** 1. Scan the Pen Drive
2. He should not open an infected E-mail

IN THE LAB

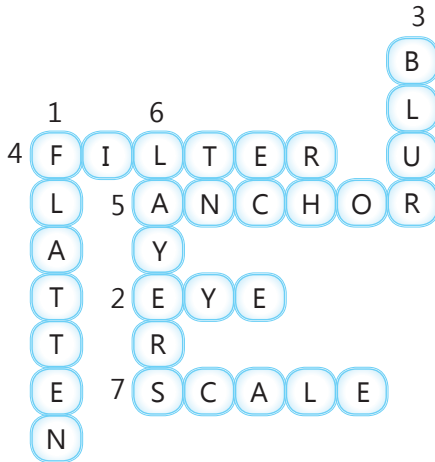
Do it yourself.



Periodic Assessment 2

(Based on chapters 3 to 5)

A.



B. Norton Quick Heal AVG McAfee

- C. 1. Sanya can use the Healing Tool.
2. Rakshit should use the Clone Tool.

Test Sheet 1

(Based on chapters 1 to 5)

Section A

- A. 1. a. 2. a. 3. a. 4. b. 5. c.
6. b. 7. a. 8. b.
- B. 1. List 2. partitions 3. Column 4. Text 5. Sharpen
6. copying, pasting 7. Filters 8. Design
- C. 1. F 2. T 3. F 4. T 5. T
6. F 7. F 8. T

Section B

- A. 1. File Explorer helps us organise and manage files and folders.
2. Pie Chart is a circular chart divided into sectors where each sector shows the relative size of each value whereas Line Chart uses connecting dots to display trends over a period of time. It is used to show trends over a period of time.



3. Retouching tools help you to add or remove objects from an image.
4. Layers are transparent sheets which are stacked on top of each other.
5. Malware, or malicious software, is designed to cause harm to your system. A malware gets installed on a computer without approval from the computer's owner.

B. 1. We need to use wildcard for searching when we can't find a file in the computer or if we don't know its location or complete name. Wildcard is a special character which is used to represent one or more characters. Generally, two wildcard characters are commonly used for searching files in a system. These are asterisk(*) and question mark (?).

2. Three components of a chart are:

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Step 1 Open the image and then click on Clone Tool icon in the Toolbox.

Step 2 Select the brush size and hardness from Tool Options.

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4. To apply filter to an image, follow the given steps:

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Step 2 Select the part of the image where you want to apply the filter.

Step 3 Click on the Filters menu from the menu bar.

Step 4 Choose Blur filter from this submenu.

Step 5 Click on Gaussian Blur option.

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Step 7 After you have applied the suitable value to the filter, click on OK button to apply the effect.

5. We can protect our system from Malware attack, with the given points:

1. Download only legal software.
2. Use the original version of windows.
3. Scan Pen drive, CD and any other external storage device for viruses before opening in computer.



6. Google Apps

EXERCISE



- A.** 1. c 2. a 3. b 4. a 5. c
- B.** 1. Sundar Pichai 2. Encryption 3. Share 4. Map, Satellite, Terrain
5. saved
- C.** 1. 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.
2. The Google Slides app is an online version of a presentation software like Microsoft PowerPoint, developed by Google in 2006.
3. Google Maps is a digital navigation program that offers detailed maps, satellite imagery, street views, and route planning for users worldwide.
4. Google mail or Gmail is one of the best and free mailing apps accessible through a web browser over the Internet.
5. Google Docs is a free online word processing program. It is similar to Microsoft Word.
- D.** 1. Follow the below steps to open Google Docs:
- Step 1** Click on the Google apps button. A drop-down menu appears.
 - 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 document template. A new blank document opens in a new tab or window.
2. Some important features of Google Slide are:
- 1. It is free and accessible from any device.
 - 2. Your work is automatically saved as you work on your presentation.
 - 3. You can directly access Google search from your presentation.
3. YouTube is the most widely used Google app. It is a video-sharing application where users can upload their videos, share, comment, watch, and like other videos. The YouTube tagline Broadcast Yourself means anyone can upload their video and share it with others. After Google Search, this is the second largest search engine.
4. Follow the steps to upload a file on Google Drive:
- Step 1:** Click on the New button.
 - Step 2:** Select the File upload option if you want to upload a file. The Open dialog box appears.
 - Step 3:** Select the files that you want to upload.
 - Step 4:** Click on the Open button.



5. 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. When working with Google Sheets, you do not need to worry about saving a spreadsheet. It is saved automatically. You can decide who you want to share your file with and give them edit, comment, or view permissions. You can also protect specific data within your sheet so that those who have access to the sheet can only edit certain cells.

- E.** 1. Anjali should change the view to "Grid View" on Google Drive.
2. Google Maps
- F.** 1. Google Slides 2. YouTube 3. Google Sheets 4. Google Docs
5. Gmail 6. Map view 7. Google

IN THE LAB

Do it yourself.

7. More on HTML 5

EXERCISE



- A.** 1. d 2. a 3. b 4. a
- B.** 1. markup 2. margin 3. <P> 4. <SUB> 5. <SUP>
- C.** 1. F 2. F 3. F 4. F 5. F
- D.** 1. HR tag is used when you want to divide your web page into different sections.
2. Text-indent property is used for indentation in HTML5.
3. <!DOCTYPE html>

```
<HTML>
```

```
<HEAD>
```

```
<STYLE>
```

```
BODY {background-image: url("D:\tile.png");
```

```
background-repeat:repeat-y;}
```

```
H1 {background-color:green;
```

```
text-align:center;}
```

```
</STYLE>
```

```
</HEAD>
```

```
<BODY>
```



```
<H1>Tiles</H1>
</BODY>
</HTML>
```

- E.** 1. Text-decoration specifies the text effects like underline, over line or strike-through.
2. 1. font-size: Specifies the font size used on the web page.
2. font-weight: Specifies thickness of the font.
3. a. <SUB> tag is used to turn the enclosed text into a subscript. For example, H₂O is coded as H₂O
<SUP> tag is used to turn the enclosed text into a superscript. For example, E=mc² is coded as E=mc²
b. text-align Specifies the alignment of the text whereas text-indent Specifies the indentation of the first line of the text.
- F.** <html> <title> <body> <h1> <hr> <p> <sup> <style> <body> <h1> <hr> <p>
 background-color text-align font-weight

IN THE LAB

Do it yourself.

Periodic Assessment 3

(Based on chapters 6 & 7)

- A.** 1. THUMBS UP icon for 'Like' 2. Google Sheets
3. Google Maps 4. THUMBS DOWN icon for 'Dislike'
- B.** 1. • The opening <body> tag is used twice, which is incorrect.
• There is no closing </body> tag.
• The indentation and structure can be improved for clarity.
2. Mismatched and incorrect tags:
- ^{and} are misused (wrongly opened/closed).
 - The closing HTML tag is incorrectly written as <\html> (should be </html>).
- Incorrect nesting:
- Tags like <sup> are not properly opened and closed inside the <p> tag.
- Semantics and formatting:
- The expression Side² should be written using superscript (²).



8. Algorithmic Intelligence

EXERCISE



- A.** 1. c. 2. a 3. b
- B.** 1. F 2. F 3. T 4. F 5. T
- C.** 1. Information processing involves acquiring, storing, analysing, retrieving, and displaying data.
2. An algorithm is a set of step-by-step instructions in a sequential manner to solve a problem.
- D.** 1. Computers use binary code, composed of 1s and 0s, to store and process data. These 1s and 0s represent electrical signals: ON for 1 and OFF for 0. For instance, the number 5 is stored as 0101 in binary.
2. The program executes the statements written inside the IF block when the condition is True. If the condition is False, the statements written inside the else block will be executed.
3.

```
READ Day
IF Day = "Sunday" THEN
PRINT "picnic"
ELSE
PRINT "School"
```
- E.** 1. @ask
2.

```
READ Number
IF Number % 3 = 0 THEN
PRINT "Number is divisible by 3"
ELSE
PRINT "Number is not divisible by 3"
```
- F.** • Start
•

```
Input the three discounts: discount1,discount2,discount3\
text{discount1}, \text{discount2}, \text{discount3}
discount1,discount2,discount3
```


•

```
If discount1>discount2\text{discount1} > \text{discount2}
discount1>discount2 and discount1>discount3\text{discount1} > \
text{discount3}discount1>discount3
```


Display: "Discount1 is the highest"
•

```
Else if discount2>discount1\text{discount2} > \text{discount1}
discount2>discount1 and discount2>discount3\text{discount2} > \
text{discount3}discount2>discount3
```



Display: "Discount2 is the highest"

- Else (if discount3\text{discount3}discount3 is greater than both discount1\text{discount1}discount1 and discount2\text{discount2}discount2)

Display: "Discount3 is the highest"

- End

9. Conditional Statements in Python

EXERCISE



- A.** 1. a 2. b 3. d 4. d 5. c
- B.** 1. True 2. false 3. top-down 4. elif
- C.** 1. x is less than or equal to 10
2. Abhi is getting an error because he used the assignment operator = instead of the equality comparison operator == in the if and elif conditions.
- D.** 1. The syntax of the if...else statement is given below:
- ```
if (Test Expression):
 Indented block
else:
 Indented block
```
2. If Meenakshi's conditional expression always returns True, then the block of statements under the if part will be executed.
- E.** 1. Zero  
2. The product is: 40  
3. Above ten and also above 20!
- F.** 1. x = 10
- ```
if (x > 5):  
    print("x is greater than 5")
```
2. marksObtained = 95
- ```
if (marksObtained > 90):
 print("Distinction")
```



```
3. x = 10
 if (x == 5):
 print("x is equal to 5")
```

## G. Conditional Statements

### IN THE LAB

Do it yourself.

# 10. AI for SDGs

## EXERCISE



- A.** 1. b                      2. a                      3. b                      4. c                      5. a  
6. b
- B.** 1. SDG                      2. 70%                      3. 17.2                      4. Marine pollution
- C.** 1. T                      2. T                      3. F                      4. T
- D.** 1. AI can help in improving the farming land, agriculture, quality of products, etc. AI can also help with aid distribution in poor and war-torn areas, or where natural disasters have caused heavy destruction.  
2. AI can help in achieving this goal by increasing the ability of healthcare professionals to analyse huge data sets, providing better feedback and finding accurately the cause of diseases to discover the cure.  
3. SDG 14 targets to prevent and reduce marine pollution, protect marine and coastal ecosystems, regulate harvesting and end destructive fishing practices, etc.  
4. SDG 16
- E.** 1. It aims to ensure equal opportunities and end discrimination by eliminating discriminatory laws, policies and practices. AI may help in improving industrial growth thereby improving the global financial market and institutions.  
2. AI for climate action has the potential to reduce global greenhouse gas emissions by up to 4 percent. Using AI and data from NASA, researchers are able to identify patterns and monitor changes of land surfaces such as decreasing sea area, ice cap surfaces, etc.  
3. AI in education can be used to achieve Quality Education goals by developing smart content, providing personalized guidance, round the clock assistance, virtual learning environment and creating more secured online exams.
- F.** 1. He can create a presentation in PowerPoint by relating the topic with SDG 15.  
2. SDG 5



14

PLAY (Ver. 2.1)-VII (Answer Key)



## Periodic Assessment 4

(Based on chapters 8 & 9)

- A.**
1. SDG 2 aims to end hunger issues by 2030 and ensure access to nutritious food for all children.
  2. SDG 5 aims to achieve gender equality and empower all women and girls.
  3. SDG 8 aims to lessen the youth unemployment.
  4. SDG 10 aims to ensure equal opportunities and end discrimination by eliminating discriminatory laws, policies and practices.
  5. SDG 15 aims at protecting, restoring and promoting the sustainable use of terrestrial ecosystems, managing forests, fighting deforestation, reversing land degradation and stopping biodiversity loss.

- B.**
1. 

```
if (age > 18) :
 print('You are eligible to vote')
else:
 print('Not eligible to vote')
```

Errors:

- (i) In line 1, colon after if condition
- (ii) In line 2, bracket close after print statement
- (iii) In line 3, colon after else.

2. 

```
a = 200
b = 33
if (b > a):
 print("b is greater than a")
else:
 print("a is not greater than b")
```

Error:

- (i) In line 3, bracket and colon after if condition

- C.** Start

Input a character from the user and store it in a variable, say ch

Convert the character to lowercase (to handle both uppercase and lowercase letters)

Check if the character is equal to 'a', 'e', 'i', 'o', or 'u'

\*0f yes, then display "It is a vowel"

\*If no, then display "It is not a vowel"

End

# Test Sheet 2

(Based on chapters 6 to 10)

## Section A

- A.** 1. c                      2. a                      3. a                      4. a                      5. c  
6. a                      7. d                      8. b                      9. (iii)                      10. (i)
- B.** 1. Sundar Pichari    2. Encryption    3. Margin    4. <P>    5. True  
6. False    7. SDG    8. 70
- C.** 1. F    2. F    3. F    4. T    5. T  
6. T

## Section B

- A.** 1. The **Google Slides** app is an online version of a presentation software like Microsoft PowerPoint, developed by Google in 2006.  
2. text-indent  
3. Information is the result of processed data. Raw data is collected, filtered, sorted, processed, analysed, stored, and then presented in a readable format, known as information.  
4. x is less than or equal to 10  
5. AI can help in achieving this goal by increasing the ability of healthcare professionals to analyse huge data sets, providing better feedback and finding accurately the cause of diseases to discover the cure
- B.** 1. The Google Slides app provides the following features:
- It is free and accessible from any device.
  - You have a choice of sharing options for your Google Slides presentation. It can be private; you can share it with a few people; or you can share it publicly on the web. You can also change the editing rights for the presentation.
  - If others are also working on a Google Slides presentation, you can chat, leave comments, and work simultaneously on the presentation.
  - Your work is automatically saved as you work on your presentation.
  - You can directly access Google search from your presentation.
2. Text-decoration specifies the text effects like underline, over line or strike-through.
3. The program executes the statements written inside the IF block when the condition is True. If the condition is False, the statements written inside the else block will be executed.





4. The syntax of the if...else statement is given below:

```
if (Test Expression):
 Indented block
else:
 Indented block
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5. It aims to ensure equal opportunities and end discrimination by eliminating discriminatory laws, policies and practices. AI may help in improving industrial growth thereby improving the global financial market and institutions.

