

## 1. Formulas and Functions in Excel 2021

### ASSESS YOURSELF

- (iii)
  - (iv)
  - (iii)
  - (i)
  - (ii)
- 60
  - 60
  - 8
  - 1
  - 5.68
  - Excel 2021
  - Open
  - 7
- #DIV/0! error.
  - #NUM! error.
  - #REF! error.
  - #VALUE! error.
  - #VALUE! error.
- T
  - T
  - F
  - F
  - T
- Function
  - Colon
  - Cell reference
  - Cell range
  - Invalid
- A cell reference is a cell address that can be used in a formula to denote a specific cell.
  - The SUM function returns the sum of a range.
  - Enter a formula into the cell after typing an equals sign. Now, press the Enter key to see the result of the formula in the cell.
  - The CONCATENATE function is used to join together two or more different text strings.
  - To select a cell range using a mouse, click in the first cell from which you want to start the range, then press and hold the left mouse button and drag the mouse diagonally to select the desired range. Now release the mouse button.
- 

#### Relative Cell Referencing

Relative cell reference refer to the cell that is above or below and left or right to a number of rows or columns.

#### Absolute Cell Referencing

The formula remain the same even if we copy and paste the formula to a new location.

b.

### Comparison Operators

These operators are used to compare two values with the given set of operators.

### Reference Operators

These operators are used to combine a range of cells for calculations.

8. a. Adhyay should use the =RIGHT function. The syntax of RIGHT function is:

Input: =RIGHT("9988776655",3)

Output: 655

b. Gaurav should use comparison operator (=) to do so.



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a. =CONCATENATE("Good ", "Morning")

result: GoodMorning

c. SUM(65, 45)

result: 110

b. =MIN(10,6,-2,0)

result: -2

d. RIGHT(1256, 2)

result: 56

## 2. Charts in Excel 2021

### ASSESS YOURSELF

- (ii)
  - (iii)
  - (iv)
  - (i)
  - (iii)
- X
  - Line
  - Legend
  - Gridlines
  - Shift
- Value axis
  - Line Chart
  - Doughnut Chart
  - Scatter Chart
  - Plot Area
  - Format Selection
- Charts in Excel are a pictorial representation of data and are also called graphs. The two commonly used charts are Column chart and Bar Chart.
  - The two advantages of using charts are:
    - A lot of information can be displayed in an easy-to-understand format.
    - Data can be presented in an attractive way to attract the attention of readers.
  - Gridlines makes it easier for users to read and understand the values.
  - To move the chart, click on the blank area in the chart. It gets automatically surrounded with borders and handles. Now you can easily click and drag the chart to the desired new location.



e. To update a chart with new rows and columns, follow the given steps:

- 1 Select the chart and click on the Chart Design tab.
- 2 Click on the Select Data command in the Data group.
- 3 Change the data range in the Chart data range text box.
- 4 Click on Ok button.

5. a. Bar Chart      b. Scatter Chart      c. Scatter Chart      d. Line Chart



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### 3. Introduction to Adobe Illustrator

#### ASSESS YOURSELF

1. a. (ii)      b. (i)      c. (ii)      d. (iii)      e. (iv)
2. a. illustration      b. Vector      c. AI      d. Width, height  
e. Artboard Area
3. a. T      b. T      c. F      d. F      e. T
4. a. Bitmap images      b. Vector illustration      c. PDF  
d. EPS      e. Freeform gradient
5. a. Vector illustrations are made using lines, shapes, and curves, while raster are made up of a grid of pixels.  
b. Common vector file formats include EPS, AI, and PDF.  
c. The key components of the Illustrator workspace are the Application Bar, Toolbar, Properties Panel, Artboard Area, and Workspace Switcher.  
d. To create a new document, click on File > New and specify parameters for your document.  
e. (i) The Selection Tool (V) in Adobe Illustrator is one of the most important tools for editing and manipulating objects.  
(ii) The Pen Tool in Adobe Illustrator is a powerful vector drawing tool used to create precise paths, shapes and curves using anchor points and curves.
6. a. EPS, because it supports high-quality printing and scalability.  
b. Compound shapes





b.

# 4. Algorithm, Flowchart and Mind Maps



## ASSESS YOURSELF



1. a. (i)                      b. (iii)                      c. (ii)                      d. (iv)                      e. (i)
2. a. Output                      b. Mind Map                      c. 1                      d. Language Translator
3. a. T                      b. F                      c. T                      d. T
4. a. Diamond                      b. Low-Level Language                      c. 3GL                      d. Mind Maps
5. a. An assembler is a software tool that translates assembly language into machine language. It enables the computer to understand and execute assembly language instructions.
- b. An ideal algorithm has the following characteristics:
  - Input: An algorithm can take input in zeros or greater quantities. It should have well-defined input.
  - Output: At least one result as output is always produced.
  - Definiteness, Finiteness, Effectiveness and Uniqueness: All instructions should be clear, finite, measurable in time and space, and produce unique results based on previous steps.
- c. Flowcharts provide the following advantages:
  - Programmers can analyse the problem in detail.
  - Programmers can easily understand the logic.
  - Ideas and solutions can be communicated easily and clearly.
  - Once the flowchart is prepared, the coding becomes easy for the programmer
- d. A compiler is a program that reads and translates all the instructions written in a high-level language into machine language at once, while an interpreter reads and translates one line of instruction at a time into machine language.
6. a. Interpreter
- b. High-level languages are written in English-like statements, which are easier to read, write, and understand compared to binary or machine language



2 Accept the age of the person.

5 Stop.



- 3 If age is greater than or equal to 18, then display, 'You are eligible to vote'.
- 1 Start.
- 4 If age is less than 18, then display, 'You are not eligible to vote'.

## 5. Internet Services

### ASSESS YOURSELF

1. a. (iii)                      b. (i)                      c. (ii)                      d. (iii)                      e. (iv)
2. a. Internet banking      b. Blog                      c. Google                      d. New  
e. Video conferencing
3. a. Messenger              b. iTunes                      c. Google                      d. Amazon  
e. Google Drive
4. a. Zoom is an application for video conferencing, letting people see and talk to each other online.  
b. Online transactions can be made without going to the bank and at any time of the day.  
c. A Blog is a personal online diary or journal that allows us to share our thoughts or ideas. It is used to connect with people with similar interests.  
d. Some benefits of e-commerce are:
  - E-commerce websites are operational round the clock, so we can purchase an item at any time of the day.
  - It allows us to compare prices and features of various products online.
5. a. Video Conferencing                      b. Google Drive



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1. The 4's preceded by 7 and not followed by 3 are: 742, 746, 741, 746  
\* There are 4 such occurrences.
2. Sleeping

## 6. Cyber Security

### ASSESS YOURSELF

- (iii)
  - (ii)
  - (iv)
  - (i)
  - (ii)
- Phishing
  - Spamming
  - Software piracy
  - 2008
  - Government
- F
  - F
  - T
  - T
  - T
- Hacking
  - Spamming
  - Copyrights
  - Cyber crime
  - Intellectual property
- Plagiarism is the act of copying information from the Internet and using it in one's projects or work without crediting the original creator. Plagiarism is considered academic dishonesty and literary theft.
    - Check the sender's email address: Verify if the email address is legitimate and matches the official domain of the bank.
      - Look for spelling and grammatical errors: Phishing emails often contain mistakes in spelling, grammar, or formatting.
      - Do not open e-mails without verifying the source.
        - Do not share your personal information via e-mails. It must be shared only via smartphone or a secure website.



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## 7. Digital Citizenship

### ASSESS YOURSELF

- (i)
  - (iii)
  - (iv)
  - (i)
  - (ii)
- Citizenship
  - Digital footprint
  - Privacy
  - Regular breaks
  - Screen-free
- F
  - T
  - T
  - T
  - T
- Digital citizenship refers to the responsible, ethical and safe use of technology.
    - You can express your thoughts online, as long as it does not harm others or break the law.
    - A digital footprint is the record of everything you do online, including the websites you visit, videos you watch, photos you upload, games you play and posts you share.



- d. • Reduces eye strain, neck pain and encourages more physical activity by taking regular breaks.
    - Helps you balance entertainment with learning activities for better brain development.
  - e. The digital world includes everything you do on devices like computers, tablets and smartphones—such as browsing websites, using search engines, playing online games or using apps.
- 5.
- a. Raghavan can manage his screen time effectively by following these steps: set time limits, take regular breaks, enjoy offline hobbies, create screen-free zones, and make a daily routine.
  - b. Some simple tips to manage your digital content wisely are as follows:
    - Think before you post or comment — is it kind and helpful?
    - Keep your personal information private.
    - Use privacy settings on apps and websites.
    - Ask an adult before signing up for a new website or game.
    - Don't click on unknown links or pop-ups.



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## 8. Creating Apps with MIT App Inventor

### ASSESS YOURSELF

1. a. (i)                                      b. (iii)                                      c. (i)                                      d. (iii)                                      e. (ii)
2. a. Mobile                                      b. Web                                      c. Coding                                      d. Properties                                      e. Variables
3. a. F                                      b. T                                      c. F                                      d. F                                      e. F
4. a. Mobile apps are software programs that perform tasks like learning, gaming, chatting, or watching videos, and are a key part of our daily lives.
- b. Variables blocks store values that can change while the app runs. You can create, set and get variable values.
- c. • Easy to use: Apps are simple and user-friendly, allowing even children to learn quickly by tapping icons.
  - Safe and secure: Verified apps protect your data and let you control settings like notifications and privacy.
- d. • Buttons: Triggers an action when tapped, like opening a screen or showing a message.
  - Label: Displays text such as messages or instructions.
  - TextBox: Lets users enter text, like a name or email.



- e. A native app is software built for a specific operating system, whereas a web app is a software program that runs on a remote server and is accessed through a web browser over the internet.
5. a. Ravi should use Label component to display the message.  
b. Built-in blocks are always available and provide basic tools for logic, text, variables and more in the Blocks Editor.

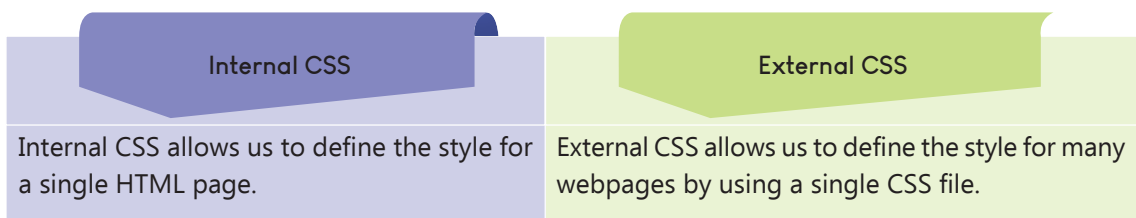


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## 9. Learn HTML5 and CSS3

### ASSESS YOURSELF

1. a. (iii)                      b. (ii)                      c. (iv)                      d. (i)                      e. (i)
2. a. F                              b. F                              c. T                              d. F                              e. T
3. a. HTML5                      b. Tags                      c. Features                      d. <HR>                      e. Three
4. a. HTML                      b. Document's title      c. Empty tags                      d. CSS3                      e. <H1>
5. a. The <BODY> tag defines the section of the HTML document that is visible on the web browser. It contains all other tags that define the content presentation elements such as images, lists, tables, text, and links to move between the webpages.  
b. The selector specifies the element to which we want to apply the formatting, and the declaration specifies the formatting to the selector.  
c. You can add comments using a special tag, which looks like this: <!-- comment goes here -->.  
d. The DOCTYPE declaration at the beginning of the page specifies that the document is written in HTML5. In HTML5, the DOCTYPE declaration is required.
- 6.



7. a. <P> tag                      b. Ravi should use the <H6> tag.                      c. text-align: center;





```
a. <Head>
  <Style>
    h1 {
      color: red;
    }
    h1 {
      color: green;
    }
  </Style>
</Head>
```

```
b. <!DOCTYPE HTML>
<HTML>
  <HEAD>
    <TITLE>Using Headings in Html5</TITLE>
  </HEAD>
  <BODY>
    <H1>Biggest Heading</H1>
    <H6>Smallest Heading</H6>
  </BODY>
</HTML>
```

# 10. Formatting a WebPage

## ASSESS YOURSELF

- |                 |                                 |          |             |          |
|-----------------|---------------------------------|----------|-------------|----------|
| 1. a. (ii)      | b. (iii)                        | c. (i)   | d. (iii)    | e. (iii) |
| 2. a. font-size | b. text-decoration, linethrough | c. color | d. repeat-y |          |
| e. margin       |                                 |          |             |          |





