

1. Computer and Computer Languages

WORKSHEET 1

Name: _____

Date: _____

A. Multiple choice questions

- Which of the following is not an example of mobile computer?
(a) Laptop (b) PDA
(c) Game console (d) Desktop
- Which of the following does not support multiple users?
(a) Microcomputer (b) Minicomputer
(c) Mainframe computer (d) Supercomputer
- Which of the following is not an example of systems software?
(a) Compiler (b) Interpreter
(c) Windows 10 (d) Photoshop
- Which of the following is an example of utility software?
(a) MS Office (b) Norton Antivirus
(c) CorelDraw (d) GIMP
- Which of the following can be modified by anyone from the public?
(a) Proprietary software (b) Shareware software
(c) Freeware software (d) Open source software
- BASIC and COBOL belong to which generation of programming language?
(a) First generation (b) Second generation
(c) Third generation (d) Fourth generation



B. Fill in the blanks

Different

Node

Supercomputers

Fifth

Software

GPUs

- Machine language codes arefor different processors.
-generation programming languages are especially focused on AI.
-is a collection of programme with no physical presence.
- Embedded computer is embedded as ainside a device.
-are the fastest of all types of computers.
- Supercomputers have a huge array of CPUs and

C. Write T for True and F for False

1. CPU is an input device.
2. Monitor is an output device.
3. A laptop can support multiple users.
4. Banks and Railways use mainframe computers.
5. A tablet has no physical keyboard.
6. Assembly level language is composed of binary code.

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D. Match Columns

Column A

1. Ubuntu
2. Kaspersky
3. CorelDraw
4. C++

Column B

- (a) Third generation language
- (b) Application software
- (c) Utility software
- (d) System software



E. Answer these questions

1. What do you understand by operating system?
2. What do you mean by compiler?
3. What do you understand by interpreter? How does the interpretation take place?
4. What do you understand by assembler?
5. What is the difference between shareware and freeware software?
6. What is the purpose of making open source software?



1. Computer and Computer Languages

Answer Keys

- A. 1. (d) Desktop
3. (d) Photoshop
5. (d) Open source software

2. (a) Microcomputer
4. (b) Norton Antivirus
6. (c) Third generation

- B. 1. different
3. software
5. supercomputers

2. fifth
4. chip
6. GPUs

- C. 1. True
3. False
5. False

2. True
4. True



- D (1) d , (2) c , (3) b , (4) a

- E 1. A programme which manages hardware and software resources and provides common services to computer programmes is called operating system. Windows and Mac OS are examples of operating system.
2. A special programme that translates a programming language's source code into machine code, byte code or another programming language is called compiler.
3. An interpreter translates code into machine code; instruction by instruction. The CPU executes each instruction before the interpreter moves on to translate the next instruction.
4. A programme that takes basic computer instructions and converts them into a pattern of bits so that the processor can use them to perform basic operations is called assembler. Assembler is also called assembler language or assembly language.
5. A shareware software is available for free usage only for a limited time but a freeware software is available for free usage for unlimited time. A shareware is trial version of a paid software.
6. There are two purposes of making open source software. The first purpose is to make it easily accessible to public. The second purpose is to utilize vast talent pool from the public to incorporate vast improvements in the software.

2. Binary Number System

WORKSHEET 1

Name: _____

Date: _____

A. Multiple choice questions

- What is the base of binary number system?
(a) 1 (b) 2
(c) 4 (d) 8
- What is the base of decimal system?
(a) 4 (b) 6
(c) 8 (d) 10
- Capital letter 'A' is represented by which number in binary system?
(a) 65 (b) 75
(c) 85 (d) 95
- One byte is equal to how many bits?
(a) 2 (b) 4
(c) 8 (d) 16
- A bit contains how many digits?
(a) One (b) Two
(c) Four (d) Eight

B. Fill in the blanks

Bit

Two

Off

16

On

- A single binary digit is called
- In binary code, zero representsposition.
- In binary code, one representsposition.
-is the base of hexadecimal system.
- Binary numbers are represented bysymbols.

C. Write T for True and F for False

1. The octal system is based on digits from 1 to 8.
2. The decimal system is based on digits from 0 to 9.
3. One bit is composed of 8 bytes.
4. One kilobyte is composed of 1,000 bytes.
5. One megabyte is composed of 1,024 kilobytes.

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D. Match Columns

Decimal number

- (1) One
- (2) Two
- (3) Three
- (4) Four
- (5) Five

Binary number

- (a) 100
- (b) 11
- (c) 101
- (d) 10
- (e) 1

E. Answer these questions

1. Add binary numbers 1101 and 10001.
2. Add binary numbers 101 and 101
3. Subtract binary number 1010 from 1101.
4. Multiple binary numbers 1101 with 1010
5. Divide binary number 1010 by 10.

2. Binary Number System

Answer Keys

- A. 1. (b) 2
3. (a) 65
5. (a) One

2. (d) 10
4. (c) 8

- B. 1. bit
3. on
5. two

2. off
4. 16

- C. 1. False
3. False
5. True

2. True
4. False

- D (1) e, (2) d, (3) b, (4) a, (5) c

E 1.

$$\begin{array}{r} 1101 \\ + 1001 \\ \hline 10110 \end{array}$$

2.

$$\begin{array}{r} \text{Carry } 1 \\ 101 \\ + 101 \\ \hline 1010 \end{array}$$

3.

-	1010
	1101
	0011

4.

$$\begin{array}{r} 1101 \\ \times 1010 \\ \hline 0000 \\ 11010 \\ 000000 \\ 1101000 \\ \hline 10000010 \end{array}$$

5.

$$\begin{array}{r} 10 \overline{)1010(101} \\ \underline{-10} \\ 010 \\ \underline{-10} \\ 00 \end{array}$$

3. Photoshop 2021: An Introduction

WORKSHEET 1

Name: _____

Date: _____

A. Multiple choice questions

1. Photoshop is produced by which company?
(a) Adobe (b) Microsoft
(c) Alphabet (d) Meta
2. Menu bar is present at which position in Photoshop window?
(a) Top (b) Right
(c) Bottom (d) Left
3. Color, layer and other properties are present in a panel at which position in Photoshop window?
(a) Top (b) Right
(c) Bottom (d) Left
4. Toolbar is present at which position in Photoshop window?
(a) Top (b) Right
(c) Bottom (d) Left
5. Photoshop files are saved with which extension?
(a) JPEG (b) PNG
(c) PSD (d) BITMAP



B. Fill in the blanks

Zoom

Move

Marquee

Magnetic

Paint bucket







1.tool is used for magnifying a select portion of the image.
2.tool is the basic selection tool to select a layer in different shapes.
3.lasso snaps to an object's edges automatically.
4.tool allows to cut and drag a picture selection anywhere on canvas.
5.tool is used to fill an area with a single colour.

C. Write T for True and F for False

1. You can make freehand drawing in Photoshop.
2. An image in Photoshop cannot be saved in any other format.
3. Crop tool removes part of an image around the selection.
4. Paint tool is used for picking a color from another image or any part of an image.
5. Hand tool allows you to navigate through a highly zoomed in image.

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D. Match Columns

Column A	Column B
	(a) Zoom
	(b) Hand
	(c) Pen
	(d) Eraser
	(e) Gradient
	(f) Eyedropper

E. Answer these questions

1. Write the steps to create a new file in Photoshop.
2. Write the steps to save a file in Photoshop into an image in JPEG format.
3. Explain the marquee tool in Photoshop.
4. What do you understand by assembler?
5. What are the uses of Lasso tool?
6. Write a short note on magic wand tool.

3. Photoshop 2021: An Introduction

Answer Keys

- A. 1. (a) Adobe
3. (b) Right
5. (c) PSD

2. (a) Top
4. (d) Left

- B. 1. zoom
3. magnetic
5. paint bucket

2. marquee
4. move

- C. 1. True
3. True
5. True

2. False
4. False

- D (1) d, (2) e, (3) f, (4) a, (5) b, (6) c

- E 1. Steps to create a new file:
- File menu → New
 - Specify details and click on create button
2. Steps to save a file
- File → Save as
 - Click the format menu and choose JPEG
 - Write a file name → Click save
3. It is the basic selection tool for selecting Photoshop layer in different shapes. There are four types of marquee tools: Rectangular Marquee, Elliptical Marquee, Single Row Marquee and Single Column Marquee.
4. The Lasso tool is used for drawing free-form border around a selection. It allows you to soften the edges of the selection or add a feathering effect. It is also used for anti aliasing. Anti-aliasing smoothens jagged edges.
5. The Magic Wand tool automatically does the selection. This tool is handy for selecting the background, or an object that is entirely one colour.



4. Introduction to HTML

WORKSHEET 1

Name: _____

Date: _____

A. Multiple choice questions

- Which of the following browsers supports HTML?
(a) Chrome (b) Opera
(c) Safari (d) All of the above
- An HTML document has at least how many parts?
(a) Two (b) Four
(c) Six (d) Eight
- Text inside which tag is displayed on the ribbon of browser?
(a) HTML (b) HEAD
(c) TITLE (d) BODY
- Text inside which tag is displayed on the webpage in a browser?
(a) HTML (b) HEAD
(c) HTML (d) BODY
- Which of the following is not a container element?
(a) P (b) H
(c) Hr (d) IMG



B. Fill in the blanks

- Additional information about an html element is called
- H1 defines theimportant heading.
- H6 defines theimportant heading.
- <p> element defines a
- tag is an example oftag.



C. Write T for True and F for False

1. Every text inside html tag is visible on a webpage.
2. Hr tag is used for showing a horizontal line on a web page.
3. H100 defines the most important heading.
4. <i> tag is used for displaying text in italics.
5. tag is use for displaying underlined text.

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D. Match Columns

Column A

- (1) <h1>
- (2) <p>
- (3)

- (4)
- (5) <strike>
- (6)

Column B

- (a) Image
- (b) Line break
- (c) Strikethrough
- (d) Paragraph
- (e) Bold
- (f) Header

E. Answer these questions

1. Briefly explain the meaning and purpose of HTML.
2. Write the minimum skeleton code for an HTML document.
3. What is the difference between container element and empty element in html?
4. What do you understand by attributes in html? Explain with suitable example.
5. What is the use of heading tags in html document?

4. Introduction to HTML

Answer Keys

- A.
1. (d) All of the above
 2. (b) Four
 3. (c) TITLE
 4. (d) BODY
 5. (c) Hr

- B.
1. attribute
 2. most
 3. least
 4. paragraph
 5. formatting

- C.
1. False
 2. True
 3. False
 4. True
 5. False

- D
- (1) f,
 - (2) d
 - (3) b
 - (4) e
 - (5) c
 - (6) a

- E 1. HTML stands for Hypertext Markup Language. It is used for creating web pages and web applications. HTML is the most basic building block of every website. It is not a programming language rather a markup language. It describes the structure of a web page systematically and converts text into beautiful and well formatted text.

2. `<html>`

```
<head>
  <title>My First Web Page</title>
</head>

<body>
  <h1>My First Web Page</h1>
  <p><b>Hello World Wide Web!</b></p>
  <p><i>Hello World Wide Web!</i></p>
  <p><u>Hello World Wide Web!</u></p>
  <p>This is my first web page.</p>
  <p>HTML tags can give <b><i>various</i></b>
  <u>looks and format</u> to the content of this web page.</p>
</body>

</html>
```

3. A container element contains something such as text and/or media, but an empty element does not contain anything. A container element always has a starting tag and a closing tag (`<>` and `</>`). But an empty element has only one tag (`<>`).
4. Additional information about an html tag is given by attributes. Following example shows attributes of img tag.

```

```

In this code, src tag shows location of image file, alt tag gives information about image in text, width and height tags show dimensions of image.

5. Heading tags are used for showing headings in order of their importance. The most important heading is written inside h1 tag while the least important heading is written inside h6 tag.

5. Website Designing Using HTML

WORKSHEET 1

Name: _____

Date: _____

A. Multiple choice questions

- Which is the default colour of hyperlink?
(a) Green (b) Blue
(c) Red (d) Purple
- tag is used for which of the following?
(a) Unordered list (b) Underline
(c) Ordered list (d) Undefined list
- tag is used for which of the following?
(a) Offline (b) Above line
(c) Ordered list (d) Zero list
- Which of the following shows the anchor tag?
(a) <anch> (b) <anc>
(c) <an> (d) <a>
- What is the full form of 'dt' in description list?
(a) Data (b) Define term
(c) Describe term (d) Data item

B. Fill in the blanks

Hyperlink

Nested

Unordered

Ordered

Image

- Alist is a list in another list.
- tag is used for inserting
- Anchor tag is used for showing
-list is used for showing bulleted points.
-list is used for showing a list with numbers or alphabets in chronological order.

C. Write T for True and F for False

1. Anchor tag is inserted between <head> tag.
2. Image can be inserted anywhere inside <body> tag.
3. Ahref="" is used for showing URL of image inside tag.
4. Ahref="" is used for writing url of a hyperlink.
5. Alt text gives brief description of image.

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D. Answer these questions

1. Give an example of unordered list by writing html code for it.
2. Give an example of ordered list by writing html code for it.
3. Give an example of description list by writing html code for it.
4. Give an example of by writing html code for it.
5. Give an example of anchor tag by writing html code for it.



5. Website Designing Using HTML

Answer Keys

- A.
1. (b) Blue
 2. (a) Unordered list
 3. (c) Ordered list
 4. (d) <a>
 5. (b) Define term
- B.
1. Nested
 2. Image
 3. hyperlink
 4. unordered
 5. ordered
- C.
1. False
 2. True
 3. False
 4. True
 5. True
- D
1.

```
<ul>  
<li>Computer</li>  
<li>Smartphone</li>  
<li>Tablet</li>  
<li>Laptop</li>  
</ul>
```


2.

```
<ol type="a">
  <li>Delhi</li>
  <li>Mumbai</li>
  <li>Chennai</li>
  <li>Kolkata</li>
</ol>
```
3.

```
<dl>
  <dt>Coffee</dt>
  <dd>Black hot drink</dd>
  <dt>Milk</dt>
  <dd>White cold drink</dd>
</dl>
```
4.

```

```
5.

```
<a href="https://www.ottimo.com">Ottimo Publication</a>
```

6. Flowcharts and Algorithms

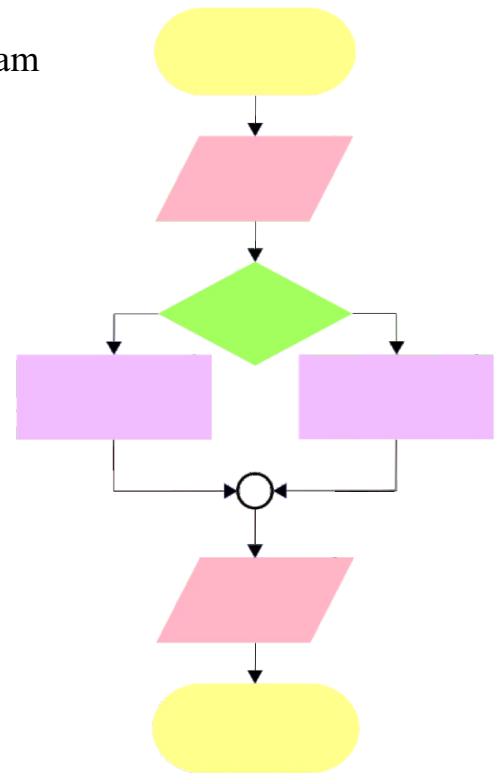
WORKSHEET 1

Name: _____

Date: _____

A. Multiple choice questions

1. Start of a flowchart is shown by which figure?
(a) Oval (b) Arrow
(c) Rectangle (d) Parallelogram
2. Which of the following is shown by arrow in a flowchart?
(a) Process
(b) Connection between various parts of flowchart
(c) Input
(d) Output
3. Input is shown by which shape in flowchart?
(a) Oval (b) Rectangle
(c) Parallelogram (d) Diamond
4. Process is shown by which shape in flowchart?
(a) Oval (b) Rectangle
(c) Parallelogram (d) Diamond
5. Decision is shown by which shape in flowchart?
(a) Oval (b) Circle
(c) Rectangle (d) Diamond



B. Fill in the blanks

Definite

Steps

Flowchart

Debugging

Instructions

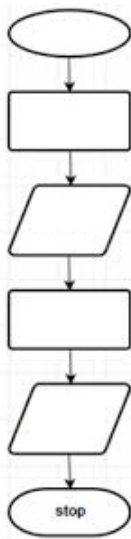
1. Algorithm is a set ofto complete a task.
2. A programme is a set ofwritten in programming language.
3. An algorithm uses aprocedure.
4. Ais a diagrammatic representation of an algorithm.
5.means identifying errors in a flow chart

C. Write T for True and F for False

1. An algorithm is quite difficult to make.
2. An algorithm facilitates easy communication.
3. An algorithm depends on a specific programming language.
4. Flowchart helps in effective analysis.
5. It is difficult to interpret a logic just by looking at flowchart.

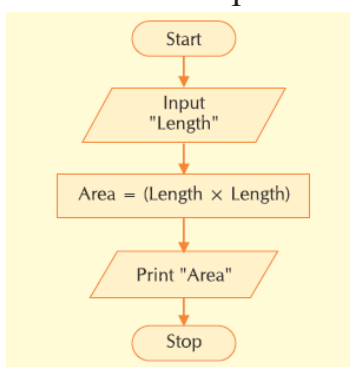
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D. In following flowchart, write the following in appropriate boxes: start, input, process, decision.



E. Answer these questions


1. What are the uses of flowchart?
2. How does a flowchart help in making effective communication?
3. How does a flowchart help in identifying mistakes?
4. Why does a flowchart fail to represent a complex task?
5. Explain different steps shown in this flowchart.



6. Flowcharts and Algorithms

Answer Keys

- A.**
1. (a) Oval
 2. (b) Connection between various parts of flowchart
 3. (c) Parallelogram
 4. (b) Rectangle
 5. (d) Diamond
- B.**
1. steps
 2. instructions
 3. definite
 4. flowchart
 5. debugging
- C.**
1. False
 2. True
 3. False
 4. True
 5. False
- D.**
1. Do it yourself
- E.**
1. Following are the uses of flowchart:
 - It helps to understand stepwise working of a process.
 - It is used in engineering, computer programming, entertainment, education, etc. for performing various tasks.
 2. A flowchart helps in recapitulating every step in an effective way. It is easy to understand and give feedback by looking at a flowchart. So, a flowchart helps in making effective communication.
 3. A flowchart shows every step at a glance; along with logic at each step. So, it is easier to find mistakes (if any) by looking at a flowchart.

- 
4. A complex task involves many steps and complex logic. For representing such a complex task, a single flowchart may not be enough and one may need to prepare a set of many interconnected flowcharts. So, representing a complex task through flowchart becomes difficult.
 5. This flowchart shows steps for finding area of rectangle.
 - Step 1: Get input (length of side)
 - Step 2: Multiply lengths and store the product into a variable.
 - Step 3: Print the result of above step

7. Future of AI and Rise of New Technology

WORKSHEET 1

Name: _____

Date: _____

A. Multiple choice questions

- AI powered robots can greatly enhance production in which sector?
 - Automobile
 - Pharmaceuticals
 - Garment
 - All of the above
- Which of the following is the best person to use AI to diagnose a disease?
 - Patient
 - Doctor
 - Nurse
 - All of the above
- Bloomberg is using Cyborg technology to quickly prepare which of the following?
 - Financial report
 - Movies
 - Animation
 - Medicines
- What is Google Duplex?
 - Google Headquarters in the USA
 - Google Headquarters in UAE
 - AI powered virtual assistant
 - Voice powered assistant
- Google Maps is a good example of which of the following?
 - AI
 - VR
 - AR
 - Fifth generation software

B. Fill in the blanks

Messaging

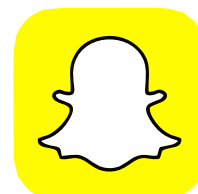
Spectacles

Navigation

Microsoft

Paint

- Snapchat is a multimediaapp.
- Google Maps is used by drivers for
- Dulux is a brand of
- Google Glass looks like
- HoloLens is developed by



C. Write T for True and F for False

1. Virtual mannequin is a great tool for doctors while planning for surgery.
2. Google Glass can be connected to a phone through Wi Fi.
3. HoloLens cannot be connected to a smartphone.
4. Ikea Place can be used for planning interior decoration.
5. Doctors often use robots to perform surgery.

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D. Answer these questions

1. Write a short note on Google Glass.
2. What do you understand by virtual mannequin?
3. What is the key difference in virtual reality and augmented reality?
4. Write a short note on Google Maps.
5. What do you understand by augmented reality?



7. Future of AI and Rise of New Technology

Answer Keys

- A.**
1. (d) All of the above
 2. (b) Doctor
 3. (a) Financial report
 4. (c) AI powered virtual assistant
 5. (c) AR
- B.**
1. Messaging
 2. Navigation
 3. Paint
 4. Spectacles
 5. Microsoft
- C.**
1. False
 2. True
 3. False
 4. True
 5. True
- D**
1. Google Glass appears like spectacles and uses augmented reality to help users. With Google Glass, you no longer need to hold your phone in hand. All commands for phone uses can be given through Google Glass. You need to give voice command or gesture command to use a phone through Google Glass.
 2. A dummy used for displaying clothes in showrooms is called mannequin. A virtual mannequin is present in the virtual world and can be accessed through smartphone. Companies are developing apps so that a virtual mannequin can resemble you. You will be able to use virtual mannequin to try different dresses before buying one.
 3. Virtual reality is completely virtual in the sense that real world is not used in this. But augmented reality is an amalgamation of virtual and real world
 4. Google Maps is a navigation app which is used by drivers to find way to a place. It uses augmented reality to superimpose map over real time map of a place. Google Maps gives suggestion for driving through the best possible route so that one can reach his destination in shortest possible time.
 5. Augmented reality is an enhanced version of real physical world. It is achieved through the use of digital visual elements. It is an integration of digital information with the user's environment in real time. .

8. Basics of Python

WORKSHEET 1

Name: _____

Date: _____

A. Multiple choice questions

- Python was first released in which decade?
 - 1980s
 - 1990s
 - 2000s
 - 2010s
- Python can be used for developing which of the following?
 - Game
 - Website
 - Puzzle
 - All of the above
- Which symbol is used for declaring comment in Python?
 - #
 - @
 - \$
 - &
- Star (*) is used in Python for which mathematical operation?
 - Addition
 - Subtraction
 - Multiplication
 - Division
- (==) symbol is used for which of the following in Python?
 - Equal to
 - Not equal to
 - Addition
 - Percent



B. Fill in the blanks

Py

Square

High

General

Tuple

- A list is enclosed withinbrackets.
- A is enclosed within parentheses.
- The file extension for Python is
- Python is alevel programming language.
- Python is available underpublic license.

C. Write T for True and F for False

1. Python is object oriented programming language.
2. There is no reserved keyword in Python.
3. Comments in Python begin with \$ symbol.
4. A line of code in Python begins with # symbol.
5. Python is a high level programming language

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D. Answer these questions

1. Which word will replace the blank space (dotted line) in following? Give reason for your
2. Which word will replace the blank space (dotted line) in following? Give reason for your
3. What do you understand by syntax errors?
4. What are the key features of Python?
5. Write the steps to open IDLE for Python.

8. Basics of Python

Answer Keys

- A. 1. (b) 1990s
2. (d) All of the above
3. (a) #
4. (c) Multiplication
5. (a) Equal to

- B. 1. Square
2. Tuple
3. Py
4. High
5. General

- C. 1. True
2. False
3. False
4. False
5. True

- D. 1. = [Bombay, Delhi, Calcutta, Chennai]

Answer: List

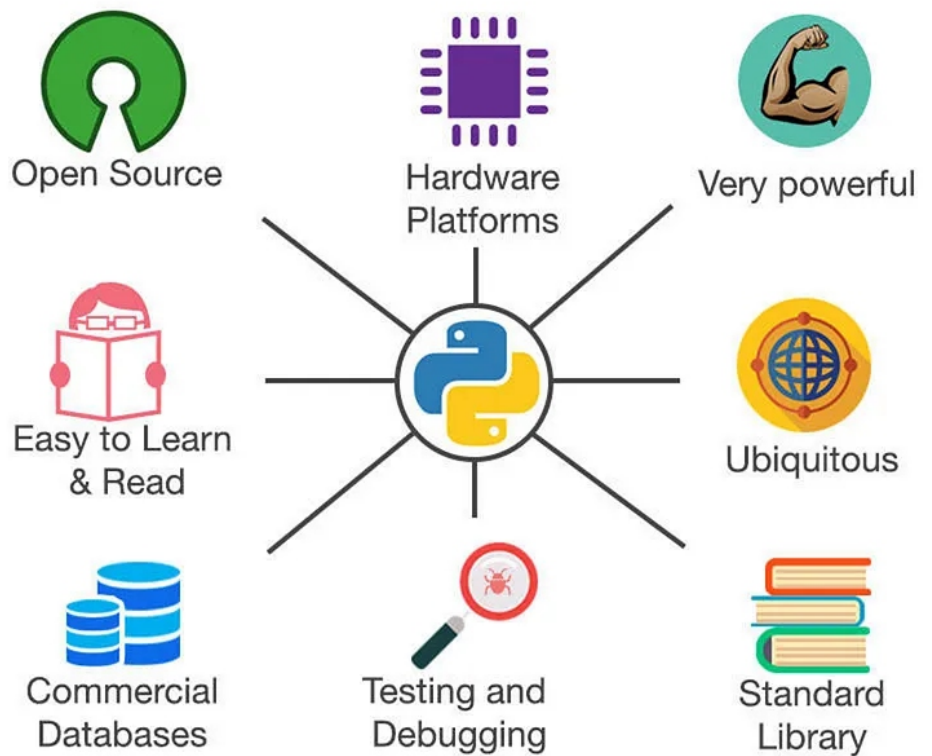
Reason: Equal to sign is followed by items inside square bracket, and separated by comma.

2. = (India, America, USA, Asia)

Answer: Tuple

Reason: Equal to sign is followed by items inside parentheses, and separated by comma.

3. Mistakes in the source code are called syntax errors. Errors such as spelling, punctuation, incorrect labels, etc. cause an error message generated by the computer. Syntax errors appear in a separate error window which shows error type and line number with error. It helps in finding mistakes and correcting them.



4. Key features of Python:

- Python programme is executed by an interpreter.
- Python respects case.
- Python is platform agnostic.
- Python includes a large library of predefined function

5. Steps to open IDLE for Python:

Step 1: Click Start menu

Step 2: Click All Programs

Step 3: Select Python 3.4

Step 4: Run the program

9. More about Python

WORKSHEET 1

Name: _____

Date: _____

A. Multiple choice questions

1. Which statement would be used for giving instruction: “If it is cold outside, carry your jacket”?
(a) If statement (b) If....else statement
(c) Elif statement (d) Nested if statement
2. Which statement would be used for giving instruction: “If it is raining, carry your umbrella otherwise carry your books”?
(a) If statement (b) If....else statement
(c) Elif statement (d) Nested if statement

B. Fill in the blanks

Infinite

Multiple

True

Two

1. If condition of while loop is always true, you get anloop.
2. While loop works as long as the condition is
3. Elif statement checks forconditions to be true.
4. If....else statement checks for one ofconditions to be true.

C. Answer these questions

1. What do you understand by if statement?
2. What do you understand by if...else statement?
3. What do you understand by elif statement?
4. What do you understand by for loop?
5. What do you understand by while loop?

9. More about Python

Answer Keys

- A.
1. (a) If statement
 2. (b) If....else statement
- B.
1. infinite
 2. true
 3. multiple
 4. two
- C
1. If is the simplest decision-making statement. It consists of the test condition and a block of code that is executed if and only if the given condition is true. Otherwise, it is skipped from execution.
 2. The if else is an extension of the if statement which not only allows the program to execute one block of code if a condition is true, but also a different block if the condition is false. This enables making decisions with two possible outcomes.
 3. Elif ladder is an extension of if else statement used to test a series of conditions sequentially, executing the code for the first true condition. A condition is checked only if all previous ones are false. Once a condition is true, its code block executes, and the ladder ends.
 4. The for loop is used to repeatedly execute a block of code as many times as instructed. It uses a variable (loop variable) whose value is used to decide the number of repetitions. It is generally used when we know how many times we want to repeat the code.
 5. The while loop allows a block of code to be executed repeatedly as long as a given condition remains true. It is often used when we want to repeat a block of code till some condition is satisfied.