Class X

ANSWER KEY

Computer Applications

1. Networking

Unit 1: Networking

Unsolved Exercise

Part A

A. 1. Telnet
2. Web Server
3. Remote Login Protocol
4. Hyper Text Markup Language/HTML
5. Flaming

B. 1. iv 2. iv 3. iv 4. iii 5. iv

C. 1. World wide Web/WWW 2. Home Page 3. Lynx 4. Spam blogs
5. Domain Name System/DNS 6. Mail Transfer Agent 7. Secure shell

Part B

A. 1. It refers to operating an application or software or database of a network or server from a remote location.

2. Internet Explorer, Mozilla Firefox, Opera, Apple Safari, Google chrome, Microsoft Edge, Lynx

3. Reservation means to purchase rights for the usage of a facility or some service for a specified and limited period of time i.e., to reserve a right temporarily.

   When one purchases such rights for any location or for occupancy of a seat for traveling to any corner of the world through Internet, it is called online reservation or 'e-Reservation' or 'e-Booking'.

4. It means hanging around a newsgroup (especially if there is a new member of the group) to see what is being discussed.

5. HTML is a standardized system to describe the structure of text-based information in a document by denoting certain text as heading, paragraphs, lists and so on and by supplementing the text with interactive forms, embedded images and other objects. Technically HTML is not a programming language.

6. The SSH (Secure Shell) protocol establishes secured remote login and secured transfer of data. It provides strong authentication and protects the communication with strong encryption.

7. Google, Bing, Yahoo!, Ask, DuckDuckGo

IMPRINT 1

8. It refers to the application of Internet media in the field of education and learning. Giving tutorials, multimedia demonstrations, imparting lectures, clarification of doubts, providing solution to problems, sharing knowledge through video conferencing, etc. helps the users to learn about things with a wide spectrum.
9. It is the network of different people who form communities among themselves to share sentiments, relationships, topics, ideas or topics of common interest. These people may be linked to each other because of some type of association among them.
10. Internet is also referred to as "Network of Networks". It establishes a high level of connectivity which has resulted into an unparallel degree of fastest, easiest and the cheapest ways to transfer or share data and information around the globe. It provides access to communication services and information resources to millions of users around the globe, round the clock.
11. A web browser is an application software that helps a user to navigate through different websites on the Internet and display web pages.
12. SMTP stands for Simple Mail Transfer Protocol. It is a TCP/IP protocol that is used in sending and receiving e-mail. Simple Mail Transfer Protocol is also known as RFC 821 and RFC 2821.
13. Hypertext Transfer Protocol Secure (HTTPS) is the secure version of HTTP, the protocol over which data is sent between the host browser and the connected website. The 'S' at the end of HTTPS stands for 'Secure'. It means all communications between your browser and the website are encrypted and secured. HTTPS is often used to protect highly confidential online transactions like online banking, online shopping, etc.
14. The following five elements are required for video countenancing:
    - Video Input: Video Camera, Web Cam, Mobile Camera.
    - Video Output: Computer Monitor, Television or Projector Screen.
    - Audio Input: Microphone, Mic.
    - Audio Output: Speakers or Earphone associated with the display devices or telephone line.
    - Network: (Data Transfer) Analog or Digital Telephone Network, LAN or Internet.
15. e-Banking refers to the online banking transactions that can be done through a computer on the Internet from any where irrespective of the location of the user.

    Advantages of e-Banking:
    - The account holder can check the account balance at any time from anywhere and can take immediate action for any variation or error in the balance of his account.
    - e-Banking is eco-friendly as it reduces the paper work.
    - e-Banking saves time, energy, natural resources and reduces traffic problem to some extent.
16. e-Governance (Electronic Governance) refers to the application of Information and Communication Technology (ICT) tools for delivering the services of government.

Benefits of e-Governance: Following are the advantages of e-Governance:

- Fast execution of process
- Reduced corruption
- High transparency
- Increased convenience
- Reduction in overall cost.

17. Post Office Protocol Version 3 or POP 3
18. Simple Mail Transfer Protocol/SMTP
19. Internet Message Access Protocol (IMAP)
20. SSH File Tranfer Protocol (SFTP)
21. Telnet
22. i. **Internet:** Internet is an interconnected Wide Area Network (WAN) of millions of computers that are linked together around the world. With Internet we can share information in the form of data, graphics, sound, software, text, etc. instantly as and when required with a minimum overhead cost.

    ii. **TCP/IP:** TCP/IP stands for Transmission Control Protocol/Internet Protocol. It is a standard Internet communication protocol that allows computers to communicate over long distances. Transmission Control Protocol/Internet Protocol, is the suite of two protocols i.e., TCP and IP, used to interconnect network devices on the Internet.

    iii. **Web Server:** A web server is the principal computer or server that stores the contents of different websites. It provides data and information to computers on request which are connected to it through the network via Internet. It is a computer that stores data and runs software that is designed to send web pages in file format when requested by web browsers.

    iv. **Newsgroup:** A newsgroup refers to a forum on the Internet where people share ideas about topics of mutual interest. The topics of interest may be from areas like politics, technology, sports, etc. Newsgroups, which are also referred to as 'Usenet', are international discussion groups that focus on some topics and help in gathering information from the Internet.

    v. **e-Mail:** Electronic mail is a mailing service provided by the Internet by which one can send messages to any person around the world through computer. It has become the fastest, easiest and cheapest means of communication for business, governance, administration, education, tourism, etc.

    vi. **SCP:** Secure Copy (SCP) is a file transfer protocol, which helps in transferring computer files securely from a local host to a remote host. It works on the Secure Shell (SSH) protocol technique. The term 'Secure Copy' refers to either the SCP protocol or the SCP program. The SCP protocol has been mostly superseded by the more comprehensive SFTP protocol.

vii. **Telnet:** Telnet stands for Teletype Network. It is a networking protocol that provides a command line interface for communication with a remote device or server, sometimes employed for remote management but also for initial device setup like network hardware. Telnet was conceptualized in 1969 and standardized as one of the first Internet standards by the Internet Engineering Task Force (IETF). Telnet does not employ any form of encryption as it was developed before the mainstream adaptation of the Internet.

B. 1. We can classify the era of mobile technology in different generations as:

- First Generation (1G): 1G refers to the first generation of cellular service, which was introduced in 1980s. It was used for voice services and was based on technology called Advanced Mobile Phone System (AMPS). It has of great contribution as it gave birth to mobile technology. It lacked security, and did not provide consistent communication during voice transmission.
- Second Generation (2G): 2G refers to the second generation cellular service and was introduced in late 1990s. It was based on digital technology and supported text messaging (SMS). It is used digital signals for voice transmission. It enabled text messaging also, 'Pagers' were introduced for text messaging.
- Third Generation (3G): 3G refers to the third generation of cellular service. It has enabled higher rate of data transmission and has provided multimedia support. In this generation, wireless technology is more enhanced over previous wireless technologies, thus it has helped in high-speed transmission, advanced multimedia access, video streaming, video chatting on wireless signal, etc.
- Fourth Generation (4G): 4G refers to the fourth generation of cellular service. It has integrated features of 3G with Internet compatibility to support wireless mobile Internet, as the data transmission speed in Standard 4G (or 4G LTE) is around five to seven times faster than 3G. 4G provides same feature as 3G but with high data transfer speed.
- Fifth Generation (5G): 5G refers to the fifth generation of cellular service launched in 2016. It is based on OFDM (Orthogonal frequency-division multiplexing). 5G technology is meant to deliver high speeds, superior reliability, negligible latency, and improved efficiency.

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3. Society is a community of people who are linked to each other by some common platform. Being social, literally means being attached to people in society and adhering to its rules. Being social with hundreds of people over the Internet is social networking. In computer, social networking refers to a link of hundreds of people around the world on Internet.

   It is the network of different people who form communities among themselves to share sentiments, relationships, topics, ideas or topics of common interest. These people may be linked to each other because of some type of association among them.

This association like that of profession, school or college, conference, training group, etc. might have been in past, present or may be in future.

4. The following five elements are required for video conferencing:
   - Video Input: Video Camera, Web Cam, Mobile Camera.
   - Video Output: Computer Monitor, Television or Projector Screen.
   - Audio Input: Microphone, Mic.
   - Audio Output: Speakers or Earphone associated with the display devices or telephone line.
   - Network: (Data Transfer) Analog or Digital Telephone Network, LAN or Internet.

5. i. **Webpage and Website:** Website is a collection of webpages displayed on the web with a client-like browser. It contains more than one web webpages that contain information. It is a combination of webpages created using HTML and CSS. It is a place used to display content.

   Webpage is a part of website that includes information and content and is displayed on the browser to user or visitor. It is a single document display on the browser. It is content displayed on the website.

   ii. **SMTP and FTP:** SMTP stands for Simple Mail Transfer protocol which is used to send mails.

   FTP stands for File Transfer Protocol which is used to send a file from source to destination in small packets.

   iii. **HTTP and HTTPS:** HTTP stands for Hypertext Transfer Protocol. HTTP offers set of rules and standards which govern how any information can be transmitted on the World Wide Web. HTTP provides standard rules for web browsers and servers to communicate.

   HTTPS stands for Hyper Text Transfer Protocol Secure. It is highly advanced and secure version of HTTP. It allows the secure transactions by encrypting the entire communication with Secure Sockets Layer.

   iv. **FTP and SFTP:** FTP stands for File Transfer Protocol. It is an internet service which is designed to establish a connection to the specific server or computer. The FTP protocol also includes commands which are used to execute operations on any remote computer.

   SFTP stands for SSH File Transfer Protocol. It provides secure file transfers over SSH (Secure Shell) to provide access to all the shell accounts on a remote SFTP server.

   v. **SMS and MMS:** SMS stands for Short Messaging Service. It is the oldest and most widely used form of text messaging on mobile devices. This form of messaging is fully operational and is supported by all the mobile devices. The user does not need to have a smartphone to use it.

   MMS stands for Multimedia Messaging Service. It is just an extension of the features of the SMS. It allows users to send multimedia like images, GIF, videos with text which was not supported in the SMS.

The MMS is advanced in comparison to SMS because of the images and videos that the users can send through it. It is more suitable for smartphones and not for analog mobile phones.

6. Following are some of the features of WWW:
   - User Friendly: WWW resources are user friendly and can be used easily with the help of web browsers.
   - Hypertext and Hyperlinks: Hypertext coordinates communication and establishes link among web pages that incorporates text, images, audio, visuals and dynamic links.
   - While browsing, some parts of the document are often highlighted with underline or displayed in a special colour. Such highlighted words that provide links are termed hyperlinks. WWW supports such hypertext and hyperlink files and thus enables Internet surfing easier for the users.
   - Multimedia documents: Multimedia documents contain information in the form of audio, video, graphics, animations and text which are viewed on web pages. WWW allows and supports the Internet users to create, link or display multimedia web pages.
   - Interactive: WWW provides a graphical interface. It supports and enables easy and convenient interaction among the users and the servers through hyperlinks and input boxes like radio buttons, check boxes, text boxes, etc.
   - Accessibility: WWW is accessible by anyone irrespective of location, caste, community, nationality, profession, physical disability, etc. A user just needs a computer, modem and Internet connection.
   - Caching: If a user revisits same web page after a short interval, it may not be needed to recall that data from the source web server. Caching enables to store data in memory. It allows to revisit or re-browse the same website while operating on the same computer before switching it off.
7. **Suggested Tips for Using a Search Engine:** To make an effective search on the Internet for a specified information:
   - Be specific, use synonyms and use lower case letters.
   - Avoid using common words, like 'Internet', 'Computer', etc., as these words are too general, hence the search engine will display thousands of matching web pages.
   - Many search engines can search information with combination of multiple words. By using the Boolean Operators (AND/OR/NOT) in queries, the result of searching can be better.
   - To search information on the basis of words or a phrase or a title, enclose them within quotes. For example, to find a book named 'The ABC of the Internet', type "The ABC of the Internet" in the search box of the search engine.
   - Use wild cards like asterisk (*) to search for related words without entering the full word. For example, if we type '*comput*', then the search will include computer, computers, computing and other related words starting with the letter 'comput'.

- Use '+' or '-' signs as they indicate that a web page must or must not include the keyword to be relevant. For example, + Texas + Universities - Technical (will find all web pages that include the word Texas and University but will not include the word Technical)

C. 1. She can attend the meeting through video conferencing.

Advantages of video conferencing:

- Saves time and money
- Reduces travelling costs

2. e-learning
3. Third Generation/3G

2. Introduction to HTML

Unsolved Exercise

Part A

A. 1. `<HR COLOR="RED">`

2. `<H5 COLOR="YELLOW">Heading Level 5</HR>`
3. `<B> <S> I Love India </S> </B>`
4.
```
<HTML>
<HEAD>
<TITLE> Ordered List with Numbering </TITLE>
</HEAD>
<BODY>
<OL TYPE="i">
<LI> OpenOffice Writer </LI>
<LI> OpenOffice Calc </LI>
<LI> OpenOffice Impress </LI>
<LI> OpenOffice Base </LI>
</OL>
</BODY>
</HTML>
```
5. BGCOLOR

B. 1. ii 2. iii 3. iv 4. iii 5. ii

C. 1. Text Editor, Web Browser 2. Container 3. document body
4. Ted Nelson 5. FACE

Part B

A. 1. Hypertext is the way of creating documents that can be displayed on the web and which helps to establish links between themselves and cross links to other pages on the web. It refers to the links among different web pages that contain different types of contents including sound, video, animation, images, etc. On World Wide Web (WWW) there are a large number of hypertext links that enable to explore additional or related information online.

2. Markup means identifying or marking the text by applying formatting features in web documents and producing different types of effect when the document is displayed.

3. `<FONT>` Tag: This is a container tag. It is used to set the text colour, text size and typeface of an HTML page. In this tag, the following attributes can be used:
   - COLOR
   - SIZE
   - FACE

4. HTML was developed in the following stages:
   - Level 0: This was the first stage. At this stage, HTML used structural elements that were supported by all web browsers.
   - Level 1: This was the second stage of development and it included enhanced features such as text highlighting and graphics, this stage of HTML was supported by standard web browsers.
   - Level 2: This was the third stage of development. At this stage, certain interactive features were used such as list boxes, buttons, etc.
   - Level 3: This was the fourth stage of development and it included attractive features like sound, video, frames, etc. This stage also supported mathematical equations and formulae.
   - Level 4: This is the present level of HTML which includes many advanced features and is an enhancement over level 3.

5. `<HTML>, <HEAD>, <TITLE>, <BODY>`

B. 1.
```
<HTML>
<HEAD> </HEAD>
<BODY> <P>
We are Proud to Present
<HR>
Orbit
<BR>
The Geometric Juggler
<HR>
</P> </BODY>
</HTML>
```

2.
```
<HTML>
<HEAD>
</HEAD>
<BODY>
<H1> <FONT FACE="Algerian" COLOR="green">
ORANGE EDUCATION
</H1>
<P>
<FONT FACE="Brush Script" SIZE="15" COLOR="blue">
<CENTER> Education is the ability to listen to almost anything
without losing your temper or your self-condfidence. </CENTER>
</P>
</BODY>
</HTML>
```

3. Tags used are:
   i. `<HTML>`
   ii. `<H1>`
   iii. `<CENTER>`
   iv. `<B>`
   v. `<OL>`
   vi. `<UL>`
   vii. `<P>`
   viii. `<FONT>`
   ix. `<LI>`
   x. `<IMG>`
4. To work in HTML, the user needs:
   - Text Editor
   - Web Browser
   - Text Editor: It provides the layout in which the text can be typed along with proper HTML syntax to create web pages. Text editor can be character or graphical based. Some common examples of the text editor are Wordpad, Notepad, WordPerfect, Front Page, KWrite, Netscape Composer, etc. The typed HTML text or codes are saved with the extension .HTM or .HTML in the file name.
   - Web Browser: Web Browser is an application software that enables to display text, images, videos, music or other contents which are coded in a text editor or embedded in a web page on the World Wide Web or on a Local Area Network.

Text and image on a web page can contain hyperlinks to other web pages in the same or in different website. Browser allows a user to easily and quickly access the information that are uploaded provided on different web pages of other web sites by traversing through these links.

C. 1. `<BODY BGCOLOR="Red">`

2. iv

3. More About HTML

Unsolved Exercise

Part A

A. 1. `<TR>` 2. `NAME`

3. `<IMG SRC="Filename">` 4. `<TR><TD ALIGN="LEFT">`

5. `<TH>`

B. 1. iii 2. iii 3. iii 4. iii

C. 1. Graphics Interchange Format 2. `<A>` 3. right

4. Height 5. SRC

Part B

A. 1. A checkbox is like a toggle switch where users can select a desired choice by clicking on the checkbox.

2. This tag is used to display the text after leaving a space of two indents from its side margin.

3. It is used to display the blocked text exactly as it is, with fixed font, spaces, tab spaces returns, etc. The main purpose of this tag is to display the text in a tabular or columnar format exactly as it is typed in the text editor.

4. ALT attribute is used to assign an alternative text that will be displayed over the image when the mouse pointer is placed over it. A user can see the text which is enclosed within the ALT attribute. The text is displayed whenever the mouse cursor moves over that area. Syntax to use the ALT attribute of the `<IMG>` tag is as follows:

```
< IMG SRC = "URL" ALT = "Text">
```

5. i. `H<SUB>2</SUB>SO<SUB>4</SUB>`

ii. `(a<SUP>2</SUP>+b<SUP>2</SUP>+2ab)+(a<SUP>2</SUP>-b<SUP>2</SUP>-2ab)`

6. i. To link to another section on the same page. Also HREF attribute value specifies the destination of a link in a particular area.

ii. By clicking on Sample Paper, the linked part of the document, i.e., where a segment was set with the name="Sample, will get displayed on the screen.

B. 1. i. The **Internal Linking** links the various sections of the same document. By clicking on the linked button, the linked part of the document is displayed on the screen.

The **External Linking** links two different documents which are present in the main storage of server or computer. When the user clicks on the link button, the document which is linked, gets opened.

ii. **<SUP>** is a container tag. It is used to display the text in superscript form. The text enclosed within this tag is raised to the power form (exponential). This tag is helpful to write arithmetic and scientific notations.

<SUB> is a container tag. It is used to display the blocked text in subscript form. The enclosed text is displayed as the base of the normal text. This tag is generally used to write formula and chemical equations.

iii. **HSPACE** Attribute is used to set the space towards left or right margin of the image. It indicates the given space between the image and the text in numbers.

VSPACE Attribute is used to set the space towards top or bottom margin of the image. It indicates the given space between the image and the text in numbers.

2. i. Adding a Radio Button: Radio buttons are used when the user has to make a selection among multiple choices or options. It is generally used for selection of gender, quiz questions, etc. For example, for accepting the gender, the programmer needs to specify two radio buttons "Male" and "Female", which belong to the same group called "Gender" so that while inputting data a user will be able to select either "Male" or "Female" but not both. For example:

```
<INPUT TYPE= "RADIO" NAME="Gender" VALUE="Male" CHECKED> Male
```

ii. A combo box provides option to list down various options in the form of drop-down list, from where a user can select desired option. For example:

```
<SELECT NAME="List Name">
<OPTION>Option1
<OPTION>Option2
</SELECT>
```

iii. This tag is used to display the text after leaving a space of two indents from its side margin. The display of the initial line of the text under this tag is similar to the text displayed in <P> tag but with a <BLOCKQUOTE> tag, even in the next line of the same paragraph the text appears after leaving the same space as it was in the initial line. Syntax to use the <BLOCKQUOTE> tag is as follows:

```
<BLOCKQUOTE> Text to be indented </BLOCKQUOTE>
```

3. The <TITLE> attribute is used to specify a title for the document to be linked. Any textual matter which is enclosed within double quotes is set as the value of the <TITLE> attribute.

4. This attribute is used to specify the space between grid line and content in the cell. The

spacing can be increased or decreased by specifying the value in number with this attribute. Syntax to use the CELLPADDING attribute is as follows:

```
<TABLE BORDER = "Value" CELLPADDING="Value">
```

5. The columns and rows of a table can be spanned (merged) by using COLSPAN and ROWSPAN attributes. COLSPAN attribute is used to merge the specified number of columns in one cell whereas, ROWSPAN attribute merges specified number of rows in one cell. Syntax to use the COLSPAN and ROWSPAN attributes is as follows:

```
<TABLE >
<TR> <TH COLSPAN= "Value"> Text  </TH> </TR>
<TR> <TH ROWSPAN= "Value">Text </TH> </TR>
</TABLE>
```

6.
```
<HTML>
<HEAD> <TITLE> Long Ansewr Type Question B.6. </TITLE> </HEAD>
<BODY >
<TABLE BORDER="12" BORDERCOLOR="GREEN" BGCOLOR="YELLOW" CELLPADDING =7>
<TH COLSPAN=4> Players Details </TH>
<TR>
<TD> </TD>
<TD> <B> First Name </TD>
<TD> <B> Last Name </TD>
<TD> <B> DOB </TD>
</TR>
<TR>
<TD> <IMG SRC="albert.jpg"> </TD>
<TD> Albert </TD>
<TD> Pinto </TD>
<TD> 8th July, 1976 </TD>
</TR>
<TR>
<TD> <IMG SRC="david.jpg"> </TD>
<TD> David </TD>
<TD> Jacob </TD>
<TD> 15th May, 1988 </TD>
</TR>
<TR>
<TD> <IMG SRC="michel.jpg"> </TD>
<TD> Michel </TD>
<TD> Atherton </TD>
<TD> 10th April, 1987 </TD>
</TR>
```

```
</TABLE>
</BODY>
</HTML>
```

C. 1.
```
<HTML>
<HEAD> <TITLE> APPLICATION BASED QUESTIONS C.1. </TITLE> </HEAD>
<BODY>
<IMG SRC="Help.jpg" ALIGN="RIGHT">
</BODY>
<HTML>
```

2.
```
<HTML> <BODY> <VIDEO WIDTH="50" HEIGHT="20" CONTROLS> <SOURCE
SRC="intro.mp4" TYPE="video/mp4"> </VIDEO> </BODY> <HTML>
```

4. Cascading Style Sheets

Unsolved Exercise

Part A

A. 1. Position 2. <LINK> 3. <H1>, <TABLE>
4. Style Sheets (CSS) 5. px, cm

B. 1. i 2. iii 3. iv

C. 1. CSS 2. Selector, Declaration
3. curly braces, semicolon 4. Background Color

Part B

A. 1. Border-Style, Border-Color, Border-Width

2. px, pt, cm, thin, medium, thick

3. CSS 'margin' properties enable to create space around an HTML element, outside any border. It is also possible to use negative values to overlap the content.

   Syntax to use the 'margin' property is as follows:

```
<P STYLE="MARGIN-TOP:Value; MARGIN-BOTTOM:Value; MARGIN-RIGHT:Value;
MARGIN-LEFT:Value;">
TEXT
</P>
```

4. The 'float' property is used for positioning and formatting content. It wraps the text around the images. The float property can be set with values such as left, right, none, etc. Syntax to use the 'float' property is as follows:

```
<IMG STYLE="float:values"
<P> TEXT </P>
```

B. 1. A CSS comprises of style rules that are interpreted by the web browser and then applied to the corresponding elements in a document. Its style rule is made of two parts i.e., 'Selector' and 'Declaration'. 'Declaration' can be further categorized into 'Property' and 'Value'. Syntax is:

```
Selector {Property:Value}
```

Where,

- Selector: It signifies or points to an HTML tag to which a style will be applied. Selector could be any tag like <H1>, <TABLE>, etc.
- Property: It is a type of attribute (such as text colour, font style, paragraph spacing, etc.) of HTML tag.
- Value: It is the value assigned to the property. Value is always followed by 'Property' and separated by 'colon'.

2. CSS Border: The CSS border properties enable to specify the style, width and colour of a border.

   Border Style: The 'border-style' property specifies the outline style of border. Some of the outline styles of border are: Doted, Dashed, Solid, Double, Groove, Ridge, Inset, Outset, None, Hidden

   Border Width: The 'border-width' property enables to set the width of a border. The value width could be either a length in 'px', 'pt' or 'cm' or it should be set to thin, medium or thick. All the four sides of a border can also be individually customized to have different width in each side. Syntax to use 'border-width' property is as follows:

```
<P STYLE = "BORDER-WIDTH: Value of Width; BORDER-STYLE: Name of the
Style;">
Text
</P>
```

3. The 'text-align' property is used to align the text in desired position. Left, Right, Center, Justify are the types of available text alignment. Syntax to use the 'text-align' property is as follows:

```
<P STYLE = "text-align: value;">
TEXT
</P>
```

4. i.
```
<P STYLE="FONT-FAMILY:Font; FONT-STYLE: Italic; FONT-SIZE:12;">
TEXT
</P>
```

   ii.
```
<P STYLE OUTLINE: Value_of_Width Style Colour; OUTLINE-OFFSET:
Value;">
TEXT
</P>
```

iii. `<P STYLE="HEIGHT:Value; WIDTH:Value">`

`TEXT`

`</P>`

5. i. Internal Style Sheet: CSS design can also be applied into an HTML document by using `<STYLE>` tag. This tag should be placed inside the `<HEAD>...</HEAD>` tags. An internal style sheet is commonly used when one web page has a unique style.

   ii. **Outline-Offset:**

   - 'outline-offset' property is used to add space between an outline and the edge/border of an element. The space between an element and its outline is transparent.
   - 'outline' property is used to set the above four properties in a single statement.

   iii. CSS 'margin' properties enable to create space around an HTML element, outside any border. It is also possible to use negative values to overlap the content. Syntax to use the 'margin' property is as follows:

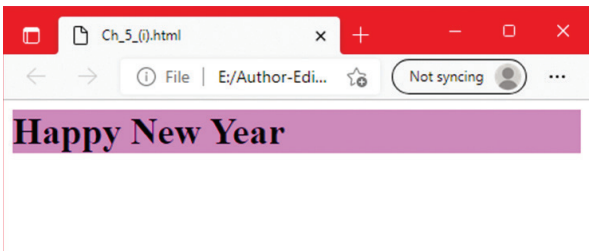
```
<P STYLE="MARGIN-TOP:Value; MARGIN-BOTTOM:Value; MARGIN-
RIGHT:Value; MARGIN-LEFT:Value;">
TEXT
</P>
```

6. i. **Corrected code:**

```
<HTML>
<HEAD>
</HEAD>
<BODY>
<H1 STYLE="background:Violet;">
Happy New Year </H1>
</BODY>
</HTML>
```

Output:

Text written in Heading 1 with background highlighted with violet colour.

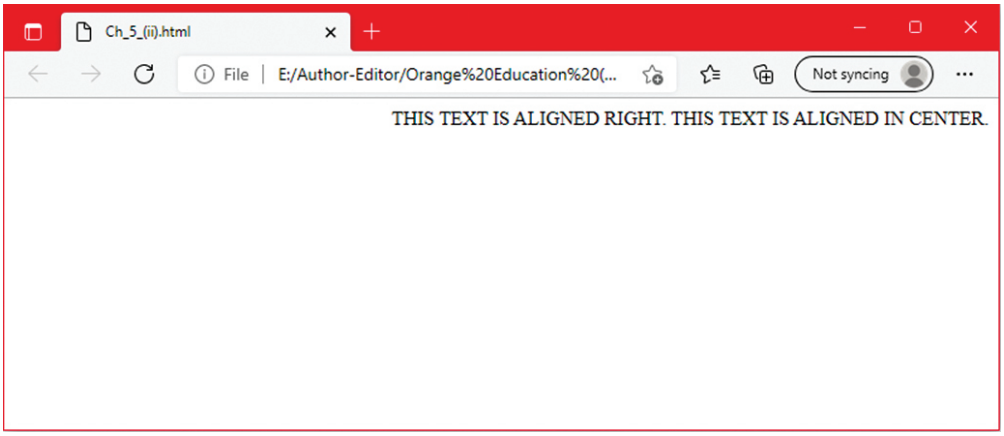


ii. **Corrected code:**

```
<HTML>
<HEAD>
</HEAD>
<BODY>
<P STYLE="TEXT-ALIGN:RIGHT;">
THIS TEXT IS ALIGNED RIGHT.
<STYLE="TEXT-ALIGN:CENTER;">
THIS TEXT IS ALIGNED IN CENTER.</P>
</BODY>
</HTML>
```

Output:

The text will be aligned towards right of the browser screen.



C. 1.

```
<HTML>
<HEAD> <TITLE> APPLICATION BASED QUESTIONS C.1. </TITLE> </HEAD>
<BODY>
<IMG SRC="Help.jpg" ALIGN="RIGHT">
</BODY>
<HTML>
```

2

```
<HTML> <BODY> <VIDEO WIDTH="50" HEIGHT="20" CONTROLS> <SOURCE
SRC="intro.mp4" TYPE="video/mp4"> </VIDEO> </BODY> <HTML>
```

Unsolved Exercise

Part A

A. 1. E-commerce Fraud 2. Digital Divide
3. Intellectual Property Right 4. End-User License Agreement
5. Spam

B. 1. iii 2. i 3. iv 4. iv

C. 1. integrity 2. Netiquette 3. Flaming
4. Software License 5. Right to Information Act

Part B

A. 1. i. Flaming: Insensible messages that are sent in a social group or during a chat are referred as Flaming. Flaming are often perceived as an insult or violation of netiquettes. It is often an emotional reaction to a post that is deemed inappropriate by any member of the group.

ii. Netiquette: Netiquette (net + etiquette) can be defined as the behaviour or informal guidelines that are followed by the users of the Internet. It includes common sense, courtesy and proper dialects while using tools of computer technology and thus signifies the culture amount Internet users. Many such guidelines are tacit and casual whereas many of these have evolved into formal rules that are directed by system administrators and the owners of IT resources.

iii. Chat and IM: Chat and Instant Messaging (IM) are Internet features that allow users to interact with people in real time. With such features, simultaneous or synchronous interaction is made possible either in a group or public forum or in a private space among two or more individuals over the net.

iv. Intellectual Property Right: 'Intellectual Property Right' is the legal right that covers the privileges of an individual who has created or invented something with his own intellectual ability or creativity and is the owner of his work. Work related to areas such as invention, literature, music, etc. can be granted with such rights. Intellectual Property Rights can be monopolized by Patents, Copyright, Trademarks, Trade Secret, etc.

v. Freedom of Information: Freedom of Information is the right to obtain information from any public authority by making a request in writing or through electronic means, to the concerned Information Officer or department specifying the particulars of the information sought by him.

However, information that are voluntarily uploaded by others or owners and are provided on the Internet is easily accessible and doesn't require any special permission from the government as the government has less control over it.

vi. Digital Divide: Digital divide is a term that refers to the gap between those who have access to the resources of modern information and communications technology, and those that have restricted access. This technology can include data, resources of mobile technology, Internet, IT and ITES, etc.

Before the late 20th century, digital divide referred chiefly to the division between those with and without telephone access; after the late 1990s the term began to be used mainly to describe the split between 'haves and have-nots' of Mobile and Internet Technology access.

2. Few e-mail etiquettes are: Salutations, Aim at consistency, Protect privacy of e-mail messages, Protect privacy of e-mail addresses, Respect copyright, Be brief, Include meaningful subject headings, Avoid all CAPS, Keep your system virus free, Spams, Advertisement.

3.
- Apache License 2.0
- BSD 3 'Clause' "New" or "Revised" license
- BSD 2 'Clause' "Simplified" or "FreeBSD" license
- GNU General Public License (GPL)
- GNU Library or "Lesser" General Public License (LGPL)
- MIT license
- Mozilla Public License 2.0
- Common Development and Distribution License
- Eclipse Public License

4. OSS are those software that are free to be used and whose source code (programmed codes) is also available to make further change and to customize as per the need of any programmer. Open Source Software (OSS) is computer software that is available with source code which permits the users to study, change and improve and at times also to distribute the software or update source code.

B. 1. i.
- **Propretary Software:** Software are the written codes of programming language and are developed by an individual or under the banner of an organization. The codes of program i.e., software is copyrighted by the developer or owner, for sale of its license or usage right to others. Such software are said to be proprietary software.

  The hallmark of proprietary software licenses is that the software publisher grants the use of one or more copies of software under the end-user license agreement (EULA), but ownership of those copies remains with the software publisher (hence use of the term "proprietary"). One example of such proprietary software license is the license for Microsoft Windows. A proprietary license does not allow you to sell, copy or distribute the software.

- **Shareware:** Some copyrighted software are distributed for use on the honorary basis for time being. Consumers uninstall it after the mentioned trial period. Shareware (also

termed trialware or demoware) is proprietary software that is provided to users without any payment on a trial basis and is often limited by any combination of functionality, availability (it may be functional for a limited time period only), or convenience (the software may present a dialog at startup or during usage, reminding the user to purchase it).

ii. **OSS:** OSS are those software that are free to be used and whose source code (programmed codes) is also available to make further change and to customize as per the need of any programmer. Open Source Software (OSS) is computer software that is available with source code which permits the users to study, change and improve and at times also to distribute the software or update source code.

FOSS: Free and Open Source Software (FOSS) can be classified as both free software and open source software i.e., anyone is freely licensed to use, copy, study and change the software in any way and the source code is openly shared so that users or developers are encouraged to voluntarily improve the software.

2. A software is said to be "free software" if the software's users have the four essential freedoms:
   - Freedom 1: The freedom to run the program as per the wish of user, for any purpose.
   - Freedom 2: The freedom to study how the program works and change it to customize for self. Access to the source code is a precondition for this.
   - Freedom 3: The freedom to redistribute copies or help others to access and use.
   - Freedom 4: The freedom to distribute the copies of the updated or modified versions to others. By doing this, the programmer can give the whole community a chance to benefit from the changes.
3. It is a kind of movement that supports, encourages and helps to create awareness for the use of open source licenses software. Programmers who support the open source movement philosophy contribute to the open source community by voluntarily writing and exchanging programming code for the software development. However, open source licenses may have some restrictions, particularly regarding the 'Expression of Respect' for the origin of software. While updating, it is expected to mention the name of the authors and to mention a copyright statement within the code and to redistribute the license of newly updated software free of charge only under the original developer/owner's license.
4. Ethical conduct which are as follows:

   E-commerce Privacy: Privacy has become a major concern for users with the rise of theft of data and passwords. e-commerce privacy relates to concealing information of an individual or an organization while doing transaction on the net. It includes the process involved while a company collects, handles, stores, shares and protects users' personal and often sensitive information gathered through their website.

   E-commerce Fraud: The term e-commerce fraud is also known as purchase fraud. It occurs when a criminal (fraudster) approaches a merchant and proposes for a business transaction

using fraudulent means such as a stolen or fake credit card to pay for transactions. This leads to payment by some other's account or leaves the merchant without getting paid for the sale that was just made. Non delivering of ordered goods and delivering false/damaged goods are also types of fraud.

C. 1. E-Commerce

2. Chat and Instant Messaging, She should be brief and respect other's convenience

6. Scratch

Unit 4: Scratch or Python

Unsolved Exercise

Part A

A. 1. It is used to add and control sound effects to the animation.

2. Eight
3. Variable
4. Motion

B. 1. ii

2. Which of the following blocks is used to send messages among the sprite?

iii

(This question was printed incorrectly in the book, please correct this question in your textbook)

3. i
4. iv

C. 1. CGI
2. sprite
3. 480, 360
4. Blocks Pallete
5. Computer Generated Imagery
6. pixels

Part B

A. 1. i. Stage: It is the area where we can preview the result of our work or project. It opens with the object called sprite which performs the actions according to the script.

The stage is divided into an x-y grid. (It is 480 units wide and 360 units tall). The center of the stage has x and y coordinate as (0,0).

ii. Thumbnail: Thumbnail is the picture of files played in reduced size that helps in recognizing them.

iii. Sprite List: It displays the thumbnail list of all the sprites that has been used in the opened project. The name of each sprite appears below its thumbnail.

If we right click on the thumbnail, it displays the following options:

iv. Script Area: Script area contains the scripts. A script is a collection of graphics/blocks that are assembled in a particular order that executes from the top to bottom.

v. Block Palette: It contains programming blocks/graphical blocks. The blocks are dragged from the blocks palette to the script area in order to make a project. A block is run by clicking on it in the script area.

vi. Direction: the sprite needs a number to indicate the exact direction. The direction numbers are between −180 and 180 degrees.

Pointing at 0 degrees is facing up with respect to the sprite. Pointing at 90 degrees is facing to the right with respect to sprite.

vii. Events can be recognized as an occurrence of some actions at a particular instance or time. For example: 'When green flag is clicked', 'When specified key is pressed', 'When sprite is clicked' and much more. Scratch provides various blocks which helps the user to control the sprite during the various events that take place during the execution of the sprite.

2. i. Computer Generated Imagery

ii. beats per minute

3. Animation is a feature in computer technology that helps to bring life to characters on screen. The word 'Animation' is derived from the Latin word 'Anim' that means 'soul'.

4. This block helps to begin a script. It is shaped in such a way that we can place blocks below it.

5. Button Screen is the other name of Blocks Palette.

6. It displays the information about a sprite such as its name, coordinates: x-y position, direction in degree (0°=up, 90°=right, 180°=down, -90°=left), lock state, rotation style, etc. Here, you can set the name of sprite, its direction, lock or unlock and the rotation style of the sprite.

7. Text Tool, Rectangle Tool, Ellipse Tool, Fill with color Tool, Line Tool, Eraser Tool

8. The point on the plane represents the distance from perpendicular lines that intersect at a position known as the 'Origin'. The complete plane area on which a point is determined by both X and Y positions is called the XY Plane. The position on the XY plane is depicted as (x, y)

9. They check the correctness of the condition as per the value given by the user. If the value is 'true', then it will execute the blocks that are snapped within, otherwise it will execute the blocks that are kept outside the Conditional block.

10. Iteration is a process in which a set of instructions or programming blocks are repeated in a sequence for specified number of times or until a condition is met. When the set of instructions is executed again, it is called an iteration. When a sequence of instructions is executed in a repeated manner, it is called a loop. A loop can have many iterations.

B. 1. To Insert Sound: Now, we will learn how to insert sound in a script using sound blocks.

- Click on 'Sound' block from the Blocks menu. The programming blocks related to 'Sound block' appear in the 'Block Palette'.
- Click and drag desired block to insert sound; here, click on 'play sound meow until done' block and drag it to the 'Script Area'.

To Set Tempo: To set Tempo, follow the given steps:

Step 1: Drag the 'set tempo to 60 bpm' programming block into the script area.

Step 2: Click on 'Control' block from the 'Blocks' menu. The programming blocks related to 'Control' appears in the 'Block Palette'.

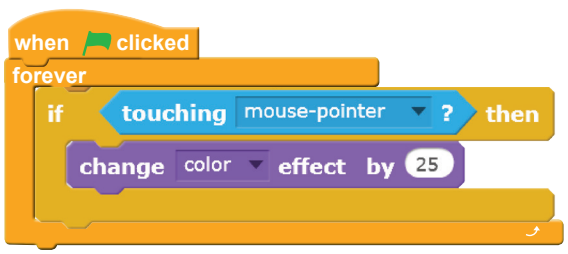
Step 3: Drag the programming blocks 'when flag clicked' and 'forever'.

2. Moves the sprite to a specified XY position.
3. Coordinates are numbers that represent the exact location in the form of (X,Y) coordinates. The X-coordinate (also called X position) is a number that represents how far left or right a sprite is on the Stage. In other words, X is the sprite's horizontal position. The Y-coordinate (also called Y position) is a number that represents how far up or down a sprite is on the Stage. The Y-coordinate is a sprite's vertical position. X and Y coordinates when written together indicate the exact location or position of the sprite on the stage.
4. In Scratch, a variable is a placeholder to store and read values from. Its stored value can change during the execution of the program.

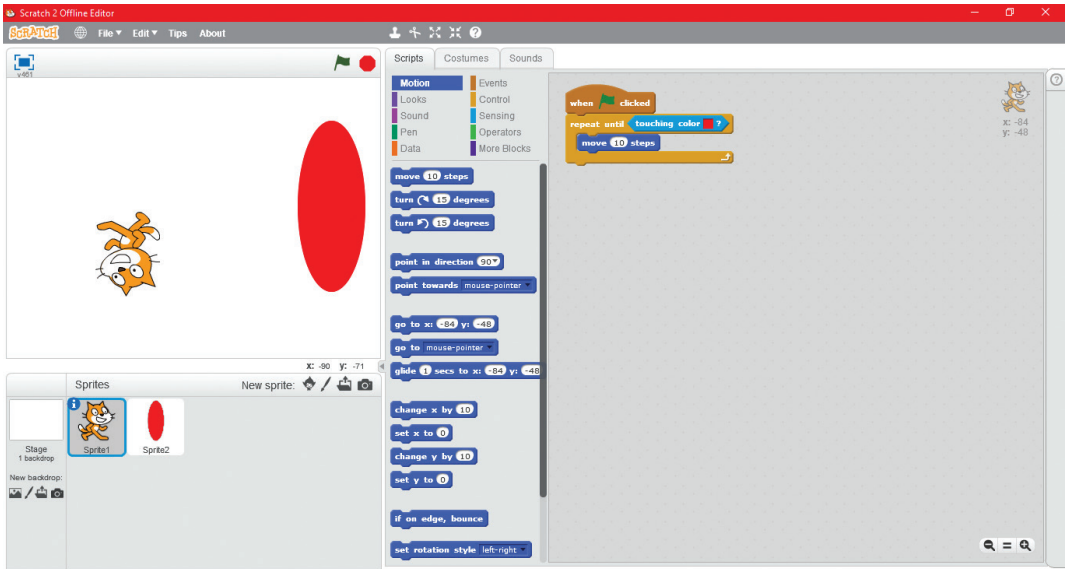
   In Scratch, variables are represented with blocks shaped like elongated circles, uniquely labeled by the user. Variables, generally speaking, can be local or global. In Scratch, a local variable can be used by just one sprite; a global variable can be used by all of your sprites.
5. 'Ask and Wait' block is used to ask a question on the screen and it will wait till the answer is typed and 'Enter' key is pressed or check mark is clicked.

   Here, whenever 'Green' flag is clicked, sprite will ask the question as mentioned in block. Once the answer is typed on the text box followed by pressing 'Enter' key, the sprite will say 'Nice to meet you' and pause for 2 seconds then the sprite will say your typed answer.

C. 1.



2.



7. Programming in Python

Unit 4: Scratch or Python

Unsolved Exercise

Part A

A. 1. Tuple 2. int, float, complex 3. Keywords
4. Tokens 5. 35

B. 1. iv 2. i 3. iv 4. iii

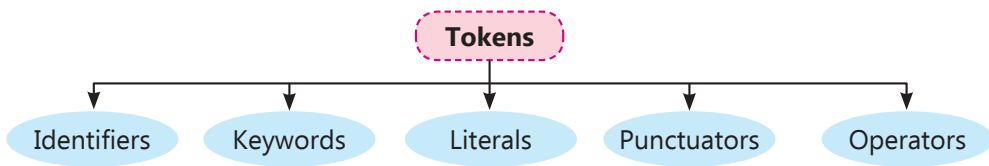
C. 1. Python spell 2. Token 3. >>>
4. input 5. Dictionary

Part B

A. 1. i. General Public License ii. Integrated Development and Learning Environment

2. i. Identifiers: Identifiers are the fundamental building blocks of a program, these are the names assigned to different elements of the program such as variables. These elements have specific properties that help in making a program.

ii. Token: The smallest individual unit in a program is referred as 'Token'. Tokens are also known as Lexical Elements or Lexical Units. It can be categorised as:



iii. Punctuators: Punctuators are used as marks or as separators in a program. The characters used as punctuators are ' " # \ ( ) [ ] { } @ , : . ' = ;.

iv. Variable: A variable is the data or value which can change during the execution of a program. It is a name given to a location in memory in which the value is stored during the execution of a program.

v. Expression: An expression represents a combination of variables, values and operators , which when evaluated produces result in the form of value.

vi. Relational Operators: Relational operators are those operators which are used to compare values produced by two arithmetical and logical expressions. These are also known as 'Comparison Operators'. For example:

- Greater than >
- Less than <
- Equal to = =
- Not equal to !=
- Greater than or equal to >=
- Less than or equal to <=

vii. Python Shell: The interactive interpreter of Python is called 'Python Shell'. It allows to create, debug, run and edit Python programs from a single interface.

3. The drawback of Interactive mode in Python is that we cannot save the statements for further use and we have to retype all the statements to re-run them.

4. It is the portion of the program in which instructions are written to create a program and execute it.

5. Python has evolved as a very useful language and is being used in many fields such as Robotics, Scientific Purposes (Used by NASA), Search Engines (Google), YouTube, Hardware Testing (Being used by Intel, Cisco, HP, etc.), GUI Interface (Popularly used in GIMP), 3D Animation (Maya), etc.

B. 1. Arithmetic operators are those operators which are used for arithmetic or mathematical calculations. In Python, the arithmetic operators are:

- Sum of two operands: (a+b) Concatenation or joining of two string operands.
- Difference between the two operands: (a – b)
- Product of the two operands: (a * b) OR prints the same string the mentioned number of times, as shown in example II.
- Quotient of the two operands: (a /b)
- Quotient of the two operands (Without fractional part): (a//b)
- Integer remainder after division of 'a' by 'b': (a%b)
- Product of 'a' by itself 'b' times (a to the power of b): (a**b)

2. Data types are the kind of data that is to be stored in the variables which is being used while writing a program. Python imagines the data type of a variable during the execution of program by their syntax. In Python, there are five standard data types:

   (a) numbers (b) string

   (c) list (d) tuple

   (e) dictionary

   (a) Numbers: This data type stores numeric values in the program. It is used for mathematical calculations.

   (b) String: They are contiguous set of characters in between pairs of single or double quotes. The quotes are not a part of string. They only denote the beginning and end of the string.

   (c) List: It is a compound data type in which the items present in the list are separated by commas and enclosed within square brackets.

   (d) Tuple: This is another data type that is similar to the list which consist of different values separated by comma and enclosed within parenthesis.

   (e) Dictionary: These are kind of key-value pairs. Key can be numbers or strings and values can be any arbitrary Python object.

3. Single line comments can be written using # sign.eg: #this is a comment. Everything after # symbol becomes non executable till the end of the line.

   Multiline comments can be added using triple quotes, example: ''' comment'''. Everything included between triple quotes is ignored by the interpreter and not executed.

4. Character set in Python consist of valid characters such as letters, digits or special characters that are recognized by the library of Python language.

Letters	A,B, ...,Y,Z or a, b, ...,y,z
Digits	0,1,2,3,4,5,6,7,8,9
Special Characters	~ ! @ # % ^ & * ( ) _ - + = | \{}[ ]: ; " ' <> , . ? / , <<, >>
White Spaces	Blank space, Horizontal tab, New line, etc.

5. The following points must be kept in mind while creating Identifiers in Python:
   - An identifier is an arbitrary sequence of letters in lower case (a to z) and upper case (A to Z), digits (0 to 9) and underscore (_).
   - The first character of the identifier must be a letter (a to z or A to Z) or an underscore (_). It must not begin with digits (0-9).
   - An identifier must not be a 'Keyword'.
   - An identifier must not contain any special character except underscore (_).

6. 'Interactive Mode' allows us to type only a single command at the command prompt '>>>'. Python interprets the given command and displays the output when the 'Enter' key is pressed.

C. 1. i. Error is: The variable 'sum' should not be in single quotes.

Correct statement is: print (sum)

ii. Error is: print should be in lower case and 'ABC Model School' should be enclosed in brackets.

Correct statement is: print ('ABC Model School')

2. i. Output:

```
Grow Gratitude
4
729
0
```

ii.
```
6        2
Keep
  smiling
rose rose rose
4        21
```

8. Decision Making in Python

Unsolved Exercise

Part A

A. 1. and 2. Logical operator 3. No 4. if 5. elif

B. 1. i 2. iii 3. ii 4. iv

Part B

A. 1.
```
1
4
9
16
25
36
49
64
```

2.
```
# Program to find second smallest number among five numbers
# (1st Method)
def find_len(list1):
      length=len(list1)
```

```
        list1.sort()
        print("second smallest number is: ", list1[1])

list1=[4,1,6,2,3]
Largest=find_len(list1)
# (2nd Method)
def second_smallest(numbers):
        m1=m2=float('inf')
        for x in numbers:
            if x<=m1:
                        m1,m2=x,m1
            elif x<m2:
                        m2=x
    return m2
print(second_smallest([9,8,5,7,6]))
```

3.
```
# Program to accept three sides of a triangle and check whether the triangle is possible or not
a=int(input("Enter 1st side of a triangle: "))
b=int(input("Enter 2nd side of a triangle: "))
c=int(input("Enter 3rd side of a triangle: "))
if (a+b<=c)or(a+c<=b) or(b+c<=a):
        print("Triangle is NOT-Possible")
else:
        print("Triangle is Possible")
```

4. **Output will be:**

Enter Principal amount: 1000

Enter Time: 5

Simple Interest = 750.0

B. 1.
```
#  Program to accept electric units and calculate electricity bill according to the following rates
    units=int(input("Enter the total number of units consumed: "))
    if(units<=100):
    payAmt=0
elif(units<=300):
```

```
    payAmt=(units-100)*2
else:
    payAmt= (200*2)+((units-300)*5)
print(("The Total Bill amount is: "),payAmt)
```

2.
```
#  Program to accept the kilometers covered and calculate the fare
according to the criteria
dis=float(input("Enter the total kilometers covered (distance): "))
if(dis<=10):
    fare=dis*11
elif(dis<=100):
    fare=(10*11)+(dis-10)*10
else:
    fare=(10*11)+(90*10)+((dis-100)*9)
print(("The Total Fare is: "),fare)
```

3.
```
#  Program to enter a length in kilometers....
len_km=float(input("Enter a length in kilometers : "))
if(len_km<=0):
   print("The entry is Invalid")
else:
   len_cm=float(len_km*1000*100)
print(("The length entered in cm is: "),len_cm)
```

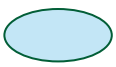
C. 12.35 is not a valid integer because it contains float value.

9. Looping in Python

Unit 4: Scratch or Python

Unsolved Exercise

Part A

A.
1. Identifiers, Literals
2. It is used to check conditions and take decision.
3. Traversing a list means accessing all the data or elements of the list one after the other in order to perform some operation on that data or element.
4. The oval, or terminator,  symbol in flowchart is used to start and end a flowchart.
5. ['O', 'R', 'A', 'N', 'G', 'E']

B. 1. i 2. iii 3. iii 4. iv

C. 1. type() 2. progress 3. Condition 4. two 5. entry controlled

Part B

A. 1. Executing a set of statements (repeatedly) for a certain number of times for specified condition is known as 'Iteration'.

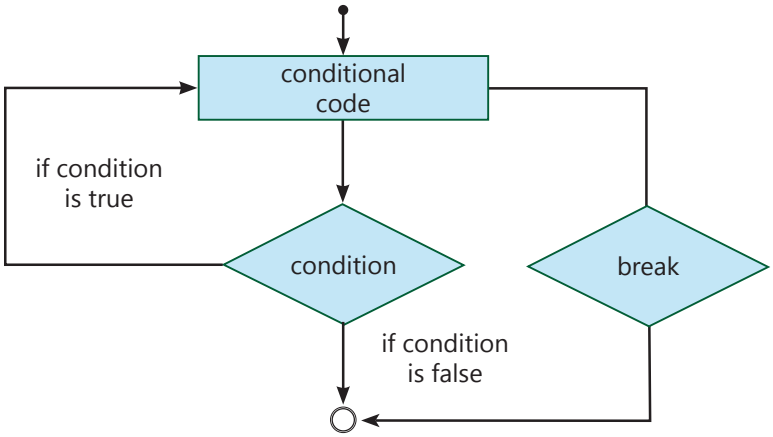
2. A "program loop" consists of two segments. One known as the body of the loop and the other known as the control statement. The control statement tests certain conditions and if the condition is true, then it executes the statements present in the body of the loop.

3. Iteration through loops i.e., iterative statements allow a set of instructions to be executed repeatedly till the given condition is satisfied. In fixed iteration, the statement gets repeated for fixed number of times. The control terminates after repeating the statement for given number of times.

4. Following are the components of a Loop:
   - Initialization: It means setting the initial value of a loop. It is also known as the control variable.
   - Test Condition (Expression): Test condition determines the repetition of the loop's body. The statement in the body of the loop executes only if the test condition (expression) is true otherwise it terminates.
   - Increment/Decrement (Step Value): The step value of a looping structure determines the increasing or decrease nature of the control variable unless the test condition is false.
   - Body of the loop: A set of statement/s which is executed within the loop.

5. Python programming language allows to use one loop inside another loop. Block of statements belonging to while statement can have another while statement i.e., a while can contain another while.

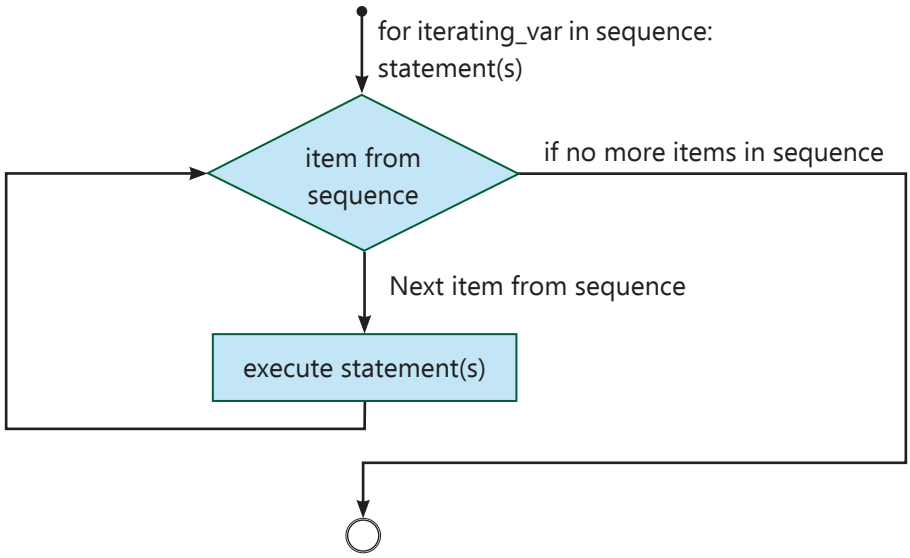
6.



7. It has the ability to iterate over the items of any sequence, such as a list or a string.

   Syntax: for iterating_var/target_list in sequence/expression_list:

   Statement(s)



8. If you are using nested loops, the break statement stops the execution of the innermost loop and starts executing the next line of code after the block.

B. 1. i. **Errors:**

In Line 2, colon (:) is missing at the end.

In Line 3, print should not be inside the parenthesis and comma should not be there at the end.

In Line 4, j has no value to which 1 is added.

Corrected Code:

```
i=1
while i<=10:
print(i)
j=i+1
```

ii. **Errors:**

The data or elements inside parenthesis of range should not be separated by semicolon(;) but it should be comma(,). The for statement should also end with a colon(:).

Corrected Code:

```
for i in range(1,11,1):
```

2. i. • While loop repeats a block of code multiple times until the given condition is met.
For loops, also called iterators, repeats a block of code for given "n" number of times.
• While loop depends on condition to be true or false.
For loop depends on the elements to be iterated.

ii. • Break statement is used to stop and exit the loop in which it is placed.
Continue statement is used to skip a single iteration of the loop in which it is placed.

- When a Break statement is executed, it halts the loop and executes the statements that are placed after the contents of the loop.

  When a continue statement is executed, it instructs the loop to continue to the next iteration and does not execute the code that is placed after the continue statements.

iii.
- In an entry-controlled loop or pre-conditional loop, the condition is tested before the start of the loop execution. If the condition is not satisfied, then the body of the loop will not be executed. For example: while loop, for loop.
- In case of an exit-controlled loop or post-conditional loop, the condition is tested at the end of the body of the loop and therefore the body of the loop is executed unconditionally at least once. For example: do-while loop.

3. i.
```
sum=0
for n in range (1,21):
    if(n%2==0):
        print(n)
        sum+=n
print("The sum of even numbers from 1 to 20 is ",sum)
```

OR

```
sum=0
for n in range (2,21,2):
    print(n)
    sum+=n
print("The sum of even numbers from 1 to 20 is ",sum)
```

ii.
```
num= int(input("Enter a number: "))
print("The multiples are: ")
for i in range(1,11):
    print(num*i)
```

iii.
```
total=0
for j in range (1,11,2):
    print(j)
    total+=j
print("The sum of odd numbers from 1 to 10 is ",total)
```

iv.
```
num=int(input("Enter a number: "))
fact=1
if num<0:
    print("Factorial does not exist for negative numbers")
elif num==0:
    print("Factorial of 0 is 1")
else:
    for i in range (num,1,-1):
        fact*=i
```

```
print("The factorial of ", num,"is: ",fact)
```

OR

```
num=int(input("Enter a number: "))
fact=1
for i in range (1,num+1):
    fact*=i
print("The factorial of ", num,"is: ",fact)
```

v.
```
for i in range (1,51):
    print(i)
```

C. 1. i. The code when executed gives "SyntaxError" as "Invalid Syntax".

ii. The incorrect syntax is the reason. The correct code syntax should be:

```
for i in range (7,0,-1):
    print( i + 1)
```

OR

```
for i in range (0,7):
    print( i + 1)
```

2. The code when executed gives "SyntaxError" as "Invalid Syntax".

The incorrect syntax is the reason. The correct code syntax should be:

```
n=int(input("Enter a number: "))
while n==3:
    print("n=3")
    break
```