Important Note:
- All answers provided in the Marking scheme are SUGGESTIVE.
- Examiners are requested to accept all possible alternative correct answer(s).
- Wherever HTML Tags are asked – ignore the format/additional arguments if so given in the answer(s)
- Wherever multiple answers are suggested, they are in order of appropriateness

FOUNDATION OF INFORMATION TECHNOLOGY

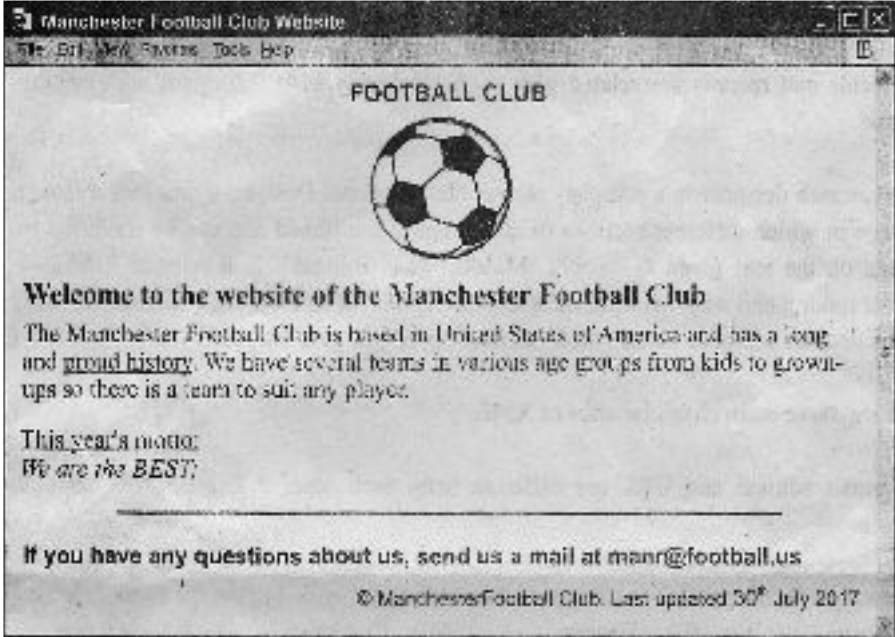|		SECTION 'A'	
Q1.		**Multiple Choice Questions:** *(1 Mark for writing each correct answer)*	(5)
	(a)	Full form of FTP is: (i) Fast Transfer Protocol (ii) File Transfer Protocol (iii) Full Transfer Protocol (iv) File Transit Protocol	
	Ans	**(ii) OR** File Transfer Protocol	
	(b)	In VLINK Attribute, V Stand for. (i) Visited (ii) Very (iii) Victory (iv) Visitor	
	Ans	**(i) OR Visited**	
	(c)	Time, Date and Number are the examples of: (i) DataTables (ii) DataSize (iii) DataBase (iv) DataTypes	
	Ans	**(iv) OR DataTypes**	
	(d)	FACE and SIZE are the attributes of _____tag. (i) FONT (ii) BASEFONT (iii) H1……..H6 (iv) Both (i) and (ii)	
	Ans	**(iv) OR Both (i) and (ii)** **Note:** ½ **Mark for (i) OR FONT** ½ **Mark for (ii) OR BASEFONT**	
	(e)	Which statement(s) true about XML? (i) It is not case sensitive. (ii) It is similar to other programming language like C & C++ (iii) It is used for defining own tags. (iv) It is not at all helpful in data storage and data sharing.	
	Ans	**(iii) OR** It is used for defining own tags.	
2		Write down one main advantage of e-Shopping.	(1)
	Ans	*(Any one of the following or any other correct advantage)* ● **Customers can easily select products from different providers without moving around physically.** ● **Faster buying/selling procedure, as well as easy to find products.** ● **Buying/selling 24 x 7.** ● **More reach to customers, there is no geographic limitation.** ● **Low operational costs and better quality of services.** ● **Special Offers and comparative/competitive prices**	
		(1 Mark for writing one correct advantage)	

3		Name any two popular web browsers.	(1)
	Ans	*(Any two of the following or any other correct popular web browser)* **Chrome, Firefox, Safari, Internet Explorer, Edge, Opera, Chromium, UC Browser, Netscape Navigator, Falkon**	
		(½ Mark for writing name of each correct web browser)	
4		$6CO_2+6H_2O \longrightarrow C_6H_{12}O_6+6O_2$ To display above given chemical expression on a webpage, following HTML code was written: 6CO\<sup\>2 \</sup\>+6H\<sup\>2\</sup\>O $\longrightarrow$ C\<sup\>6\</sup\>H\<sup\>12\</sup\>O\<sup\>6\</sup\>+6O\<sup\>2\</sup\> But its not displaying the expression in desired format. Identify the fault(s) and suggest the required correction(s).	(1)
	Ans	**The \<sup\> tag defines superscript text. While, the \<sub\> tag defines subscript text.** **Thus all \<sup\> tags need to be replaced with \<sub\> tags** **OR** **6CO\<sub\>2 \</sub\>+6H\<sub\>2\</sub\>O $\longrightarrow$** **C\<sub\>6\</sub\>H\<sub\>12\</sub\>O\<sub\>6\</sub\>+6O\<sub\>2\</sub\>**	
		(½ Mark for identifying the fault only) *OR* *(1 Mark for writing the corrected HTML code OR the required correction)*	
5		Give any two examples of popular search engines.	(1)
	Ans	*(Any two of the following or any other correct search engines)* **Google, Bing, Yahoo, Ask.com, AOL.com, Baidu, Wolframalpha, DuckDuckGo**	
		(½ Mark for writing name of each correct search engine)	
6		What is WWW?	(1)
	Ans	**The World Wide Web ('WWW') is a collection of webpages found in the Internet.** **OR** **WWW is Network of World Wide Computers** **OR** **Any other appropriate definition**	
		(1 Mark for writing the expansion of WWW) *OR* *(1 Mark for writing description of WWW)*	
		SECTION 'B'	
7		Match web services/URL given in column 'A' with corresponding web services/URL given in column 'B':	(2)

Column A	Column B
Social Networking site	https://www.amazon.in
https://web.skype.com/	e-Banking
e-Shopping	Video Conferencing
https://www.onlinesbi.in/	https://www.facebook.com/

	Ans			
			Column A	Column B
			Social Networking site	https://www.facebook.com/
			https://web.skype.com/	Video Conferencing
			e-Shopping	https://www.amazon.in
			https://www.onlinesbi.in/	e-Banking

		(½ Mark for each correct match)	
8		Mention any two benefits of ICT in Education.	(2)
	Ans.	*(Any two of the following or any other correct benefit)* ● **Promotes Learning by doing approach** ● **Enables self-paced learning OR More individual learning** ● **Provides access to wide range of up-to-date learning materials** ● **Enriches learning through a combination of audio, video, images, text and animation** ● **Enhances learning through interaction and collaboration/team work** ● **Provides a platform that engages students** ● **Measurable outcomes**	
		(1 Mark for writing each correct benefit - upto any two correct benefits)	

9		Write HTML code to generate the webpage as shown below having lists in the given style:
		 Career Options
		● Medical
		  1. Medicine
		  2. Research
		● Engineering
		● Marketing **OR**
		
		Discuss the use of <UL> and <LI> tag with suitable example of each.
			(2)

	Ans	`<HTML>                            <!-- Optional -->`
		`<BODY>                            <!-- Optional -->`
		`Career Options`
		`<UL>`
		`    <LI> Medical`
		`    <OL>`
		`        <LI>Medicine`
		`        <LI>Research`
		`    </OL>`
		`    <LI>Engineering`
		`    <LI>Marketing`
		`</UL>`
		`</BODY>                    <!-- Optional -->`
		`</HTML>                    <!-- Optional -->`
		
		OR
		
		The <UL> tag is used together with the <LI> tag to create Unordered List.	

		Example: **<UL>** 　　　**<LI>Medical** 　　　**<LI>Engineering** 　　　**<LI>Marketing** **</UL>** **will generate the webpage as:** 　● Medical 　● Engineering 　● Marketing	
		For the code: *(½ Mark for writing correct code for <UL> </UL>)* *(½ Mark for writing correct code for <LI> </LI> under <UL>)* *(½ Mark for writing correct code for <OL> </OL>)* *(½ Mark for writing correct code for <LI> </LI> under <OL>)* *OR* *For describing the use of <UL> and <LI> tag with example* *(1 Mark for writing correct use of <UL> with <LI> tag)* *(½ Mark for writing correct example of <UL>...</UL> tag)* *(½ Mark for writing correct example of <LI>...</LI> tag)*	
10		A table named "Customer" has following columns: CustId, Name, City, MobileNo Indentify which column (s) cannot be specified as Primary key and why? <div align=center>**OR**</div> How fields and records are related with each other in a table ? Explain with suitable example.	(2)
	Ans.	**Name and City cannot be specified as Primary Key, because these columns can have duplicate values for different records.** **OR** **Table: A table has records (rows) and fields (columns).** **Record: Contains specific data, like information about a particular employee or a product.** **Field: Contains data about one aspect of the table, such as First Name or E-mail Address.** **Example:** 	
		For identifying Non Primary Key columns: *(1 mark for correct identification)* *(1 mark for correct reason)* *OR* *(½ Mark for correct explanation of Field in a table)*	

		(½ Mark for correct explanation of Record in a table) *(½ Mark for correct example of Field in a table)* *(½ Mark for correct example of Record in a table)*	
11		Gaurav, a web designer in a company named "International Designers" has just created a webpage in which different sections of the webpage are linked and can be traversed by clicking on the text as "Top", "Middle" and "Bottom". Is it internal linking or external linking and why? Additionally tell him about the suitable tag and its attribute(s) to open another webpage named 'second.html' by clicking on the text "Next".	(3)
	Ans.	Internal linking, because the links are used to traverse different sections in the same webpage. The tag and attributes to open another webpage named 'second.html' by clicking on the text "Next" is `<a href="second.html">Next</a>`	
		(1 Mark for writing correct option as Internal Linking) *(1 Mark for writing correct reason of the option as Internal Linking)* *(1 Mark for writing correct tag <a> and attribute <href>)*	
12		Write any three main characteristics of XML.	(3)
	Ans.	*(Any three of the following or any other correct characteristic)* ● XML stands for eXtensible Markup Language ● XML is a markup language much like HTML ● XML tags are not predefined like HTML tags are ● XML was designed to store and transport data ● XML was designed to be self-descriptive ● XML is a Case Sensitive Language ● XML is used to create new internet languages ● XML is W3C recommendation ● XML is platform independent and language independent ● XML is not a replacement for HTML	
		(1 Mark for writing each correct characteristic - upto 3 characteristics)	
13		How email address and URL are different from each other? Explain with suitable example.	(3)
	Ans.	*(Any of the following or any other correct difference)* ● URL is Uniform Resource Locator. email is Address of Electronic Mail ● URL is the web address of a web page while email is used to send electronic messages to each other using computer networks. ● In the email @ is used which is not present in any URL. ● The email address is often used in lower case, while websites or web address are written in mixed letters. ● email is always used to receive electronic mails while web address is not used to receive any mails. ● A web address is used to access a website where information can be found while email is not used to get any information. ● URL can directly be typed in browser to access web site/page whereas email Address can not be browsed as web site/page **Examples:** ● URL: abc.com, cbse.nic.in, ncert.nic.in/NCERTS/textbook/textbook.htm OR Any other correct example of URL ● Email: secy-cbse@nic.in , ncert.media@gmail.com, ntse2@yahoo.co.in, OR Any other correct example of email	

		(1 Mark for writing correct meaning of URL/expansion) *(1 Mark for writing correct meaning of email/expansion)* *(½ Mark for writing correct example URL)* *(½ Mark for writing correct example email)*	
14		Discuss the role of spyware as a threat to information security. Define the following: (i) Virus (ii) Hacker (iii) Cracker **OR** What is the need to take the data backup? Discuss online backup briefly.	(3)
	Ans.	**FIRST OPTION** Spyware is software that aims to gather information about a person or organization without their knowledge and gives the access to someone else. **OR** Spyware is a software, which spies on your data/activities and passes on to others. **(i) Virus :** A computer virus is an executable software that spreads from one computer to another. **OR** A piece of code which is capable of copying itself and typically has a detrimental effect, such as corrupting the system or destroying data. **OR** **Any other correct definition** **(ii) Hacker :** A hacker is an individual, who breaks security for non-malicious reasons to test the security of a system. **OR** A hacker practices to modify/alter computer software/hardware and informs the creator about the security issues. **(iii) Cracker :** A cracker is a person who violates computer security for malicious intentions or for personal gain **OR** A cracker practices to modify/alter computer software/hardware and uses it for personal gains/ to trouble the creator. **SECOND OPTION** Data Backup is the copying and archiving of computer data so it may be used to restore the original in case of data-loss. Online backup is a method of web/cloud storage in which data is regularly backed up on a remote server/cloud. Examples of Online backup tools are: Google Drive, Dropbox etc.	
		FOR FIRST OPTION *(1 Mark for writing each * Role of Spyware, * definition of Virus, * definition of Hacker and * definition of Cracker - upto three)* *OR*	

		FOR SECOND OPTION *(1 ½ Marks for writing correct need for Data Backup)* *(1 ½ Marks for correctly defining Online Backup)* **OR** *(1 Mark for writing example of Data Backup/Online Backup only)*	

15		Draw the XML tree for the code given below:
		<EVENTS>
		  <SPORTS>
		    <ZONAL>
		      <Player>Rajesh</Player>
		      <Date>22-Feb-2018</Date>
		      <Place>Shakti Stadium</Place>
		    </ZONAL>
		  </SPORTS>
		  <CULTURAL>
		    <MUSIC>
		      <Artist>Uma Shankar Ji</Artist>
		      <Date>18-Dec-2017</Date>
		    </MUSIC>
		  </CULTURAL>
		</EVENTS>
			(5)

	Ans.

OR

OR

Any other way of Tree Representation of XML | |

		(½ Mark for Root element EVENTS) *(½ Mark for each correct elements SPORTS and CULTURAL under EVENTS)* *(½ Mark for each correct elements ZONAL and MUSIC under SPORTS and CULTURAL respectively)* *(½ Mark for each correct sub-element Player, Date and Place under ZONAL)* *(½ Mark for each correct sub-element Artist and Date under MUSIC)* *Note:* ● *No marks to be deducted if attributes/values not mentioned/shown alongwith the elements/subelements* ● *No marks to be deducted if elements/subelements are not shown in the boxes but placement(s) of elements/subelements correctly shown*	
16		Attempt any **one** question out of given **two**:	(5)
	(a)	Observe following output and write HTML code to generate it. Consider the following points while generatings the web page: ● The title of the page is "FOOTBALL CLUB" ● The heading is blue color ● Font of entire documents is Arial ● Image Used is "football.jpeg" ● The page is linking to: ○ Proud history to "history.html" ● Bottom message is of size 2. **OR**	
	(b)	Differentiate between the following with respect to Tables in HTML: (i) Cellspacing and Cellpadding. (ii) Rowspan and Colspan.	

	(a)
	Ans
		`<HTML>`
		`<BODY>`
		  `<HEAD>`
		    `<TITLE>FOOTBALL CLUB</TITLE>`
		    `<!-- OR <TITLE>Manchester Football Club Website</TITLE> -->`
		  `</HEAD>`	

```
<BODY>
  <FONT FACE="Arial">
  <CENTER>
  <!-- OR <P ALIGN="Center"> -->
  <H1><FONT COLOR= "Blue" >FOOTBALL CLUB</H1></FONT>
  <BR>
  <IMG SRC="football.jpeg" >
  </CENTER>
  <B>
   Welcome to the website of the Manchester Football Club
  </B>
  <BR>
  The Manchester Football Club is based in United States of
America and has a long and
  <A HREF="history.html">proud history</A>.
We have several teams in various age groups from kids to
grown-
ups so there is a team to suit any player
  <BR><BR>
  <U>This year's motto:</U>
  <BR>
  <I>We are the BEST:  </I>
  <HR>
  <B>If you have any questions about us, send us a mail at
manr@football.us</B>
  <BR>
  <FONT SIZE=2>
<P ALIGN="Right">© ManchesterFootball Club Last updated
30<SUP>th</SUP> July 2017
  </P>
  </FONT>
  </FONT>
</BODY>
</HTML>
```

(½ Mark for TITLE tag OR showing title/heading of the page)
(½ Mark for changing font color of the heading to BLUE)
(½ Mark for changing font to ARIAL)
(1   Mark for correct use of IMG tag)
(1   Mark for correct use of A tag)
(½ Mark for Horizontal Rule/line)
(½ Mark for changing font size to 2)
(½ Mark for either right alignment of the bottom message
*   OR center alignment of Heading)*

Note:
  ● **Ignore use of all other tags/attributes**

(b) **(i) The cellspacing attribute specifies the space, in pixels between cells.**

```
<body>
<p>Table without cellspacing:</p>
<table>
   <tr>
       <th>Month</th>
       <th>Savings</th>
   </tr>
   <tr>
       <td>January</td>
       <td>Rs100</td>
   </tr>
</table>
<p>Table with cellspacing:</p>
<table cellspacing="10">
   <tr>
       <th>Month</th>
       <th>Savings</th>
   </tr>
   <tr>
       <td>January</td>
       <td>Rs100</td>
   </tr>
</table>
</body>
```

Table without cellspacing:

Month	Savings
January	Rs100

Table with cellspacing:

Month	Savings
January	Rs100

The cellpadding attribute specifies the space, in pixels between the cell wall and the cell content.
Example:

```
<body>
<p>Table without cellpadding:</p>
<table>
   <tr>
       <th>Month</th>
       <th>Savings</th>
   </tr>
   <tr>
       <td>January</td>
       <td>Rs100</td>
   </tr>
</table>
<p>Table with cellpadding:</p>
<table cellpadding="10">
   <tr>
       <th>Month</th>
       <th>Savings</th>
   </tr>
   <tr>
       <td>January</td>
       <td>Rs100</td>
   </tr>
</table>
</body>
```

Table without cellpadding:

Month	Savings
January	Rs100

Table with cellpadding:

Month	Savings
January	Rs100

(ii) The rowspan attribute specifies the number of rows a cell should span.
OR
　　Rowspan is used to merge multiple rows

Example:

```
<table>
   <tr>
      <th>Month</th>
      <th>Savings</th>
      <th>Savings for holiday!</th>
   </tr>
   <tr>
       <td>January</td>
       <td>Rs100</td>
       <td rowspan="2">Rs50</td>
   </tr>
   <tr>
       <td>February</td>
       <td>Rs80</td>
   </tr>
 </table>
```

Month	Savings	Savings for holiday!
January	Rs100	Rs50
February	Rs80	

The colspan attribute defines the number of columns a table cell should span.
OR
Colspan is used to merge multiple columns

Example:

```
<table>
   <tr>
       <th>Month</th>
       <th>Savings</th>
   </tr>
   <tr>
       <td>January</td>
       <td>Rs100</td>
   </tr>
   <tr>
       <td>February</td>
       <td>Rs80</td>
   </tr>
   <tr>
       <td colspan="2">Sum:Rs180</td>
   </tr>
</table>
```

Month	Savings
January	Rs100
February	Rs80
Sum: Rs180	

(2 ½ Marks for correct differentiation between Cellspacing and Cellpadding)
OR
- *(1 Mark for correctly defining/explaining/illustrating Cellspacing)*
- *(1 Mark for correctly defining/explaining/illustrating Cellpadding)*

(2 ½ Marks for correct differentiation between Rowspan and Colspan)
OR
- *(1 Mark for correctly defining/explaining/illustrating Rowspan)*
- *(1 Mark for correctly defining/explaining/illustrating Colspan)*