

Class: X Session: 2020-21
Computer Applications (Code 165)
Sample Question Paper (Theory)
Marking Scheme

Maximum Marks: 50

Time Allowed: 2 Hours

Question No.	Part-A	Marks allocated
	Section-I	
	This section consists of 13 questions of very short answer type. Question no. 4 to 8 are of 'fill in the blank' type. Fill the blank with the most appropriate answer. Attempt any 10 questions from question no 1 to 13.	
1	What is a Homepage?	1
Ans	The default (first) page of a website is called a Homepage. (1 Mark for the correct answer)	
2	Which heading element gives the most prominent headings?	1
Ans	<H1> (1 Mark for the correct answer)	
3	Give one use of anchor tag.	1
Ans	Anchor tag is used to create hyperlinks. (1 Mark for the correct answer)	
4	_____ tag is used for a horizontal line.	1
Ans	HR tag (1 Mark for the correct answer)	
5	An empty HTML element has a _____ tag but no _____ tag.	1
Ans	start, end (1/2 Mark each for start and end)	
6	_____ tag creates a bulleted list.	1
Ans	 (1 Mark for the correct answer)	

7	The code for inserting an image in an HTML page is <code><imgsrc=" " alt=" "></code> . The alt attribute is used for _____	1
Ans	specifying alternate text for the image	
	(1 Mark for the correct answer)	
8	Ravi was trying to log-in to his net-banking account. He noticed that the URL of the net banking starts with 'https'. The 's' in 'https' stands for _____	1
Ans	Secure	
	(1 Mark for the correct answer)	
9	Sarita is designing a webpage and wants to change the name of the font (font-type) for certain text. Which attribute of the FONT tag she should use.	1
Ans	face	
	(1 Mark for the correct answer)	
10	What is the use of <code>
</code> tag in HTML Code?	1
Ans	<code>
</code> tag is used to insert a single line break in a HTML Document.	
	(1 Mark for the correct answer)	
11	What is the significance of the URL?	1
Ans	URL specifies unique address of each document on the internet.	
	(1 Mark for the correct answer)	
12	What is the importance of vlink attribute of <code><BODY></code> tag?	1
Ans	vlink attribute specifies the color of visited links in a document	
	(1 Mark for the correct answer)	
13	What is the method of using comment line in the HTML code?	1
Ans	<code><!-- Any text --></code>	
	(1 Mark for the correct answer)	
	Section-II Both the Case study based questions are compulsory. Attempt any 5 questions (out of 7 questions) from each case study. Each question carries 1 mark	
14	Internet Protocols For communication over the Internet, the communicating devices must follow certain rules. These rules are called Internet protocols. For email communication, we use SMTP and POP. For communication between browser and server	

	HTTP and HTTPS protocols are used. We can use TELNET to access services available on a remote computer.	
(i)	Which of the following is an Internet Protocol. a) HTTP b) FTP c) both (a) and (b) d) None of the above	1
Ans	c) both (a) and (b)	
	(1 Mark for the correct answer)	
(ii)	SMTP protocol is a) used for composing an emailmessage. b) used in receiving incoming emails by pulling the message from server to client c) used in sending outgoing emails by pushing the message from client to server d) None of the above	1
Ans	c) used in sending outgoing emails by pushing the message from client to server	
	(1 Mark for the correct answer)	
(iii)	POP protocol is a) used for composing an emailmessage. b) used in receiving incoming emails by pulling the message from server to client c) used in sending outgoing emails by pushing the message from client to server d) None of the above	1
Ans	b) used in receiving incoming emails by pulling the message from server to client	
	(1 Mark for the correct answer)	
(iv)	Which of the following internet protocols provides secure data transmission between server and browser with the help of encryption. a) HTTP b) HTTPS c) TELNET d) ARPANET	1
Ans	b) HTTPS	
	(1 Mark for the correct answer)	
(v)	The full form of POP (email protocol) is a) Post Order Protocol b) Push Order Protocol c) Post Office Protocol d) Pull Over Protocol	1

Ans	c) Post Office Protocol	
	(1 Mark for the correct answer)	
(vi)	Which of the following protocol is used for delivering data from the source to the destination. a) TCP b) IP c) SMTP d) ARPANET	1
Ans	b) IP	
	(1 Mark for the correct answer)	
(vii)	The Full Form of SMTP is a) Secure Mail Transfer Protocol b) Secure Mail Transmit Protocol c) Simple Mail Transmit Protocol d) Simple Mail Transfer Protocol	1
Ans	d) Simple Mail Transfer Protocol	
	(1 Mark for the correct answer)	
15	<p style="text-align: center;">Secure data transmission</p> <p>Secure data transmission means that data/information is not being received or modified by an unauthorized person, over a network, from source to destination. For secure data transmission, we can convert an actual message (which is in readable form) into an unreadable message (called an encrypted message) with the help of the concept of encryption. This unreadable message is sent through the network to the destination. If a hacker tries to read this message, he/she receives an unreadable message that cannot be easily converted into the actual message. The unreadable message can be converted to the original message by the receiver at the destination.</p> <p>Caesar Cipher is one of the common encryption techniques. In this technique, each letter of the word is replaced by a letter some fixed number of positions (usually called as key) down the alphabet. For example, if the key is 3, each 'A' will be replaced by 'D' (Letter 'D' is 3 positions down Letter 'A' in the alphabet), each 'B' will be replaced by 'E' and similarly, each 'Z' will be replaced by 'C'. The receiver can identify the original message by using the reverse technique of encryption. This reverse technique is called decryption.</p>	
(i)	.Secure data transmission means a) Data can be accessed by any unauthorized person during transmission. b) Data can not be accessed by any unauthorized	1

	<p>person during transmission.</p> <p>c) Transmission of data</p> <p>d) None of the above</p>	
Ans	b) Data can not be accessed by any authorized person during transmission	
	(1 Mark for the correct answer)	
(ii)	<p>Which of the following techniques can be used for security of data.</p> <p>a) Authentication</p> <p>b) Authorisation</p> <p>c) Encryption</p> <p>d) All of the Above</p>	1
Ans	d) All of the Above	
	(1 Mark for the correct answer)	
(iii)	<p>Caesar Cipher is</p> <p>a) used for conversion of the actual message into an encrypted message</p> <p>b) an encryption technique</p> <p>c) both (a) and (b)</p> <p>d) None of the above</p>	1
Ans	c) both (a) and (b)	
	(1 Mark for the correct answer)	
(iv)	<p>Person 'X' has received an encrypted message and wants to convert this message into the actual message (message before encryption). The technique he should use is called</p> <p>a) Conversion</p> <p>b) Encryption</p> <p>c) Decryption</p> <p>d) None of the above</p>	1
Ans	c) Decryption	
	(1 Mark for the correct answer)	
(v)	<p>A sender wants to send a message having the text as 'COMPUTER' to a receiver using 4 as the key. What will be the encrypted message?</p> <p>a) GSQTZXIV</p> <p>b) GSQTYXIV</p> <p>c) GSXTYXIV</p> <p>d) GSQSYXIV</p>	1
Ans	b) GSQTYXIV	
	(1 Mark for the correct answer)	
(vi)	<p>An encryption algorithm is used to transform a readable message into:</p> <p>a) Text message</p>	1

	b) Simple message c) Converted message d) Encrypted message	
Ans	c) Encrypted message	
	(1 Mark for the correct answer)	
(vii)	In Ceaser Cipher, for which of the following values of key, the encrypted message will be the same as original message. a) 0 b) 26 c) both (a) and (b) d) None of the above	1
Ans	c) both (a) and (b)	
	(1 Mark for the correct answer)	
	Part –B All questions are compulsory. In case of internal choices, attempt any one.	
16	Sarvesh, a student of Class X, is not able to understand the difference between web client and web-server. Help him in understanding the same by explaining their role and giving suitable example of each.	2
Ans	Web-Client: An application (Web Browser, Chatting Program, etc.) that requests for services from a web-server. Example: Web Browsers, Chatting Applications Web-Server: Web-server is a software (or any dedicated computer running this software) that serves the request made by web-clients. Example: Apache Server	
	(1/2 mark each for explaining the role of Web-Client and Web-Server) (1/2 mark each for example of web-client and web-server)	
17	Write the full form of Cc and Bcc (used in emailcommunication). Explain the difference between them.	2
Ans	Cc : Carbon Copy: every recipient can check who else has received the mail. Bcc : Blind Carbon Copy: no recipient can check who else has received the mail.	
	(1/2 mark each for full form of Cc and Bcc) (1 mark for explaining the correct difference)	
18	What is the use of <sub> and <sup>tag. Explain with suitable example.	2

Ans	<p><sub> : defines subscripted text <sup> : defines superscripted text Example To write a² : a<sup>2</sup> To write CO₂ : CO<sub>2</sub></p>	
	<p>(1/2 mark each for explaining the use of <sub> and <sup> tag) (1/2 mark each for example of <sub> and <sup> tag)</p>	
19	<p>Sunil wants to insert an image 'elearning.jpg' into a webpage. Write the name and the syntax of the HTML Tag she should use. The alternate text for the image should be 'E-learning Image'</p>	2
Ans	<p>Name of Tag : Image Tag () Syntax of Tag :<imgsrc = "elearning.jpg" alt = "E-learning Image"></p>	
	<p>(1/2 mark for correct name of tag) (1/2 mark for correct use of img tag in syntax) (1/2 mark for correct use of src attribute) (1/2 mark for correct use of alt attribute)</p>	
20	<p>Define the following (i) Intellectual Property Rights (ii) Plagiarism</p> <p style="text-align: center;">OR</p> <p>What is e-commerce? Write any two preventive measures to be taken for secure online transaction.</p>	2
Ans	<p>Intellectual Property Rights: rights given to creators for creations of their minds. Plagiarism: taking credit of ideas/words of another person</p> <p style="text-align: center;">OR</p> <p>e-commerce: Buying and selling of goods on the internet Two preventive measures for secure online transaction 1. Never share OTP with anyone. 2. Before making an online payment, ensure that connection is secure (HTTPS)</p>	
	<p>(1 mark each for the correct definition of Intellectual Property Rights and Plagiarism)</p> <p style="text-align: center;">OR</p> <p>(1 mark for the correct definition of e-commerce) (1/2 mark each for two preventive measures)</p>	
21	<p>Shalini, a web designer, wants to create a webpage to display a list where each item is listed by a number. Which type of list she should use? Explain the role of start and type attributes.</p>	3
Ans	<p>Ordered List</p>	

	<p>Role</p> <p>Start Attribute: specifies the start value of an ordered list</p> <p>Type Attribute: specifies the type of the list item marker</p>	
	<p>(1 mark for the correct list type)</p> <p>(1 mark each for explaining the correct role of start and type attributes)</p>	
22	<p>What are the roles of Rowspan and Colspan attribute? Explain with suitable HTML example.</p>	3
Ans	<p>Rowspan : Combine Cells vertically</p> <p>Colspan : Combine Cells horizontally</p> <p>Example</p> <pre><table border = '1'> </tr> <tr> <td>Row-1 Column-1</td> <td colspan="2">Row-1 Column-2and3</td> <td rowspan="2">Row-1and2 Column-4</td> </tr> <tr> <td>Row-2 Column-1</td> <td>Row-2 Column-2</td> <td>Row-2 Column-3</td> </tr> </table></pre>	
	<p>(1/2 mark each for explaining correct role of Rowspan and Colspan)</p> <p>(1 mark each for correct explanation of Rowspan and Colspan using HTML example)</p>	
23	<p>Saroj, a student of Class X, wants to represent a table in webpage but she is unaware about the table tag. Explain her the role of <th>, <tr> and <td> tag. Write HTML code of a table and show the use of <th>, <tr> and <td> tag.</p>	3
Ans	<p><tr> : defines table row.</p> <p><th> : defines table header.</p> <p><td> : defines table data/cell.</p> <p>HTML Code</p> <pre><table> <tr> <th>Roll Number</th> <th>Name</th> <th>Stream</th> </tr> <tr></pre>	

	<pre> <td>1</td> <td>Ajay</td> <td>Arts</td> </tr> <tr> <td>2</td> <td>Vijay</td> <td>Commerce</td> </tr> <tr> <td>3</td> <td>Ramesh</td> <td>Commerce</td> </tr> </table> </pre>	
	<p>(1/2 mark each for explaining the correct role of <th>, <tr> and <td> tag)</p> <p>(1.5 mark for correct code of HTML table showing the use of <th>, <tr> and <td> tag)</p>	
24	What is the digital divide? Write any two reasons for digital divide in India.	3
Ans	<p>Digital Divide refers to the differing amount of information between those who have access to ICT and those who don't have access.</p> <p>Reasons</p> <ul style="list-style-type: none"> • due to the unequal distribution of wealth, poverty is higher in rural areas • Less Literacy rate in rural India 	
	<p>(1 mark for the correct definition of digital divide)</p> <p>(1 mark each for any two correct reasons for the digital divide in India)</p>	
25	<p>Define Internet and write its two uses in our daily life. How is it different from the World Wide Web (www).</p> <p style="text-align: center;">OR</p> <p>What is e-learning? Explain any two merits of e-learning.</p>	3
Ans	<p>The Internet is a worldwide network that links many smaller computer-networks.</p> <p>Uses of the Internet</p> <ol style="list-style-type: none"> 1. e-learning 2. e-commerce <p>The difference between the internet and www</p> <p>www: It is a collection of various hypertext documents available over the internet. www is a part of the internet.</p> <p>internet: A worldwide network that provides various other</p>	

	<p>services (apart from www) like email-communication, File sharing, etc.</p> <p style="text-align: center;">OR</p> <p>e-learning: learning through the courses which are delivered online.</p> <p>Benefits :</p> <ol style="list-style-type: none"> 1. Self Paced (Learn at your speed). 2. We can attend classes at anytime and anywhere. 	
	<p>(1 mark for the correct definition of the internet) (1/2 mark each for writing two use of internet in daily life) (1 mark for explaining the correct difference between internet and www)</p> <p style="text-align: center;">OR</p> <p>(1 mark for the correct definition of e-learning) (1 mark each for writing any two merits of e-learning)</p>	
26	<p style="text-align: center;">Our Country : India</p> <div style="text-align: center;">  </div> <p style="text-align: center; color: red;">India is spread over a large geographical area. In terms of area, it is the 7th largest country while in terms of population, it is the 2nd largest country in the world. Some facts about India are as follows</p> <ul style="list-style-type: none"> • Area : Approx 3.28 million sq. km • North to South extension : Approx 3,200 km • East to West extension : Approx 2900 km <p>Write the HTML code to design the above-shown web page considering the specifications as given below :</p> <ul style="list-style-type: none"> • Background color of the page should be yellow. • Heading 'Our Country : India' should be the first level of heading • The image named 'India.jpg' should be placed at the center. • Formatting style for the paragraph <ul style="list-style-type: none"> ○ Font Size: 5 ○ Font Name: Times New Roman ○ Color: Red • Superscript and subscript tags should be used wherever required. • Facts (as shown in the above web-page) should be written with the help of the unordered list. 	5

	<p style="text-align: center;">OR</p> <p>Answer the following</p> <p>a. What is a Hypertext link?</p> <p>b. Give the name and the syntax of the HTML Tag which is used for creating a Hypertext Link.</p> <p>c. Neha wants to display a 'Click Here' message on her webpage which, when clicked, opens a new webpage 'Chapter2.html'. Write the syntax of the HTML command she should use.</p> <p>d. On the same webpage, Neha whose email is neha@xyz.com, wants to display a 'Contact us' message which when clicked open the email program and allows the user to send a mail to Neha. Write the syntax of the HTML command she should use.</p> <p>e. Explain the use of the target attribute in the Hypertext Link Tag.</p>	
<p>Ans</p>	<pre><html> <body bgcolor="yellow"> <center> <h1> Our Country : India </h1> <imgsrc="india.jpg"> </center> <p> India is spread over a large geographical area. In terms of area, it is the 7<sup>th</sup> largest country while in terms of population, it is the 2<sup>nd</sup> largest country in the world. Some facts about India are as follows</p> Area :Approx 3.28 million sq. km North to South extension :Approx 3,200 km East to West extension :Approx 2900 km </body> </html></pre> <p style="text-align: center;">OR</p> <p>a. Hyperlink allows us to link HTML elements (text and/or image) to another document or new section within the current document.</p> <p>b. Name : anchor tag, Syntax Hyperlink Text</p>	

	<p>c. <code>Click Here</code></p> <p>d. <code>Contact us</code></p> <p>e. Specifies where to open the linked document when the link is clicked.</p>	
	<p>(1/2 mark for the correct<html> structure)</p> <p>(1/2 mark for the correct use of bgcolor attribute of <body>)</p> <p>(1/2 mark for the correct use of <H1> tag)</p> <p>(1/2 mark for the correct use of image src tag)</p> <p>(1/2 mark for the correct use of <center> or attribute align = 'middle' in)</p> <p>(1/2 mark for the correct use of font color)</p> <p>(1/2 mark for the correct use of font size)</p> <p>(1/2 mark for the correct use of font face)</p> <p>(1/2 mark for the correct use of <sup> tag)</p> <p>(1/2 mark for the correct use of unordered list)</p> <p style="text-align: center;">OR</p> <p>a. (1 mark for the correct definition of Hypertext link)</p> <p>b. (1/2 mark each for name and writing syntax of anchor tag)</p> <p>c. (1 mark for correct syntax)</p> <p>d. (1 mark for correct syntax)</p> <p>e. (1 mark for explaining the use of target attribute)</p>	