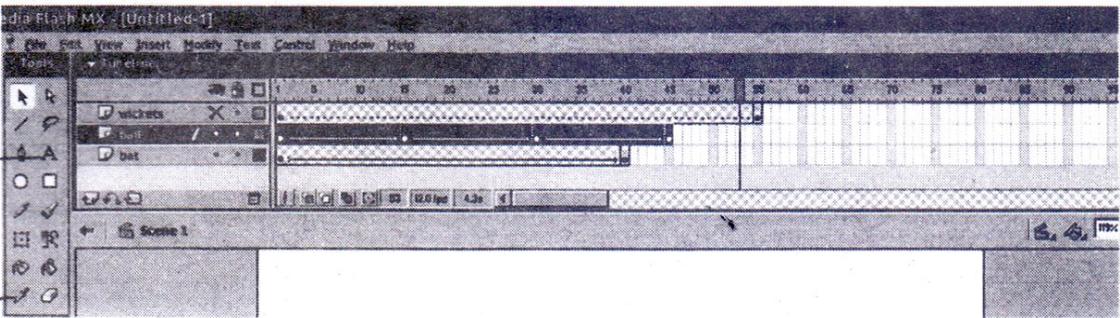


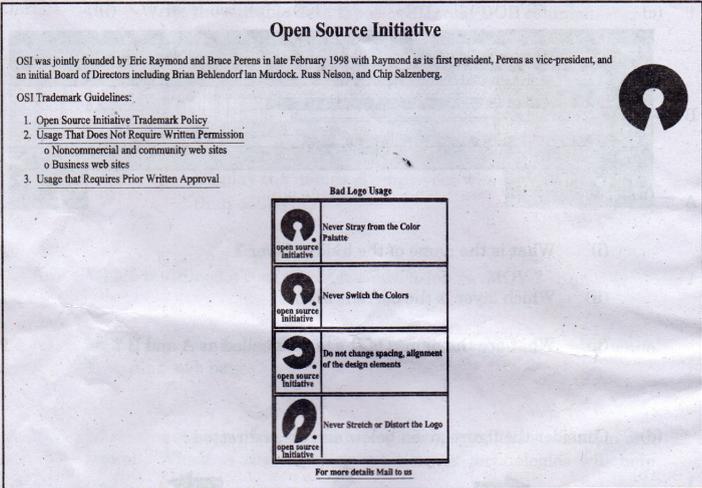
Important Note:

- 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 SQL queries are answered, single quote ‘ as well as double quotes “” are acceptable to enclose text/date values.
- Wherever multiple answers are suggested, they are in order of appropriateness

1.	(a)	Study the following data and answer the questions given below: Table : Salesperson																																					
		<table border="1"> <thead> <tr> <th>SID</th> <th>Name</th> <th>Phone</th> <th>DOB</th> <th>Salary</th> <th>Area</th> </tr> </thead> <tbody> <tr> <td>S101</td> <td>Amit Kumar</td> <td>98101789654</td> <td>1967-01-23</td> <td>67000.00</td> <td>North</td> </tr> <tr> <td>S102</td> <td>Deepika Sharma</td> <td>99104567834</td> <td>1992-09-23</td> <td>32000.00</td> <td>South</td> </tr> <tr> <td>S103</td> <td>Vinay Srivastav</td> <td>98101546789</td> <td>1991-06-27</td> <td>35000.00</td> <td>North</td> </tr> <tr> <td>S104</td> <td>Kumar Mehta</td> <td>88675345789</td> <td>1967-10-16</td> <td>40000.00</td> <td>East</td> </tr> <tr> <td>S105</td> <td>Rashmi Kumar</td> <td>98101567434</td> <td>1972-09-20</td> <td>50000.00</td> <td>South</td> </tr> </tbody> </table>	SID	Name	Phone	DOB	Salary	Area	S101	Amit Kumar	98101789654	1967-01-23	67000.00	North	S102	Deepika Sharma	99104567834	1992-09-23	32000.00	South	S103	Vinay Srivastav	98101546789	1991-06-27	35000.00	North	S104	Kumar Mehta	88675345789	1967-10-16	40000.00	East	S105	Rashmi Kumar	98101567434	1972-09-20	50000.00	South	
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	(i)	Which key can be chosen as the primary key of the above table ?	1																																				
	Ans	SID OR Phone <i>(1 mark for the correct attribute name)</i>																																					
	(ii)	What is the degree and cardinality of the given table ?	1																																				
	Ans	Degree - 6 Cardinality - 5 <i>(½ mark for the correct degree) +(½ mark for the correct cardinality)</i>																																					
	(iii)	Write the suitable data types of SID and DOB columns	1																																				
	Ans	SID - Alphanumeric OR Text OR Character OR Varchar Note: Except Numeric/Date/Boolean DOB - Date OR Date/Time <i>(½ mark each for the correct data type of the two attributes)</i>																																					
	(iv)	With reference to the above given table, write commands in SQL to (A) Insert First record in the table (B) Display the names of employees who have salary higher than 45000.	2																																				
	Ans	(A) INSERT INTO Salesperson VALUES ('S101' , 'Amit Kumar' , 98101789654 , 1967-01-23 , 67000.00 , 'North') ; OR INSERT INTO Salesperson (SID, Name, Phone, DOB, Salary, Area)																																					

	<p>VALUES ('S101' , 'Amit Kumar' , 98101789654 , 1967-01-23 , 67000.00 , 'North'); <i>(½ mark for correct use of INSERT INTO Salesperson)</i> <i>+(½ mark for correct use of VALUES part of the statement)</i></p> <p>(B) SELECT Name FROM Salesperson WHERE Salary > 45000; OR SELECT * FROM Salesperson WHERE Salary > 45000;</p> <p><i>(½ mark for correct use of SELECT .. FROM)</i> <i>+(½ mark for correct use of WHERE clause with > as well as >= as condition)</i></p>	
	(b) Which multimedia component has extension as .MOV?	1
Ans	Movie / Movie clip / Video <i>(1 mark for the correct component name)</i>	
	(c) Name any two image formats that are most popularly used while designing web pages.	1
Ans	<ul style="list-style-type: none"> ● JPG/JPEG ● GIF ● TIFF ● PNG <p><i>(½ mark each for any two correct image formats)</i></p>	
	(d) In an amusement park, the trainer wants to give the simulation of the cockpit. Which of the following multimedia technologies will help him ?	1
Ans	<ul style="list-style-type: none"> ● Video on Demand ● Virtual Reality ● Video Conferencing <p>Virtual Reality <i>(1 mark for the correct technology)</i></p>	
	(e) Mention any one use of multimedia in (i) Education (ii) Entertainment	2
Ans	<p>(i) Education -</p> <ul style="list-style-type: none"> ● Video/Animations/Simulations to teach use of complex machines ● smart classes ● CIA ● Sharing notes/ lectures <p>(ii) Entertainment -</p> <ul style="list-style-type: none"> ● Use of Video on demand to view programs in real time ● download programs and view them later ● Playing Game ● Watching Movie/Animations/Simulations. 	

		<p><i>(1 mark each for any one appropriate use of Education and Entertainment fields)</i></p> <p><i>Note: Full mark for any other appropriate use of given fields</i></p>	
2		Answer the following questions based on Macromedia Flash:	
	(a)	What is a blank keyframe?	1
	Ans	<p>A blank keyframe is a keyframe with no content. OR A keyframe is a frame where we define changes in the animation from the previous frame. The key frame in between the transition is blank keyframe.</p> <p><i>(1 mark for the correct definition of Blank Keyframe)</i> OR <i>(½ mark for the correct definition of Keyframe only)</i></p>	
	(b)	Write any two types of symbols that are in Flash.	1
	Ans	<ul style="list-style-type: none"> ● Graphic / Image ● Button ● Movie Clip / Video <p><i>(½ mark each for any two correct symbols)</i></p>	
	(c)		
	(i)	What is the name of the hidden layer?	1
	Ans	<p>Wickets OR Top most layer OR First layer</p> <p><i>(1 mark for the correct layer name)</i></p>	
	(ii)	Which layer is the current layer?	1
	Ans	<p>Ball OR Middle layer OR Second layer</p> <p><i>(1 mark for the correct layer name)</i></p>	

	(iii) What are the names of the tools labelled as A and B?	2
Ans	<p>A - Eyedropper Tool OR Dropper Tool B - Text Tool <i>(1 mark each for the two tool names)</i> <i>Note: ½ mark in case the answer for B is Text Box tool</i></p>	
	<p>(d) Consider the figure given below and do as directed</p>  <ul style="list-style-type: none"> • The arrow on the right hand side shows the position for frame 20. • The arrow on the left hand side shows the position for frame 1. • The arrow in frame 1 rotates to frame 20 as shown. • The image of the arrow is saved in Flash Library. <p>Write the procedure and property settings for animating the above scenario.</p>	4
Ans	<ul style="list-style-type: none"> • Select frame 1 from the timeline and insert the given image from library. • Select the Arrow tool and double click on the image. • Convert the image to symbol by selecting Insert > Convert to Symbol. (Optional) • Select any frame between 1 to 20 and select Insert - Keyframe. • Select the object using arrow tool and rotate it with the Rotate modifier tool . • Select frame 20 from the timeline and select Insert - Keyframe. • At frame 20 select the object using arrow tool and rotate it with the Rotate modifier tool. • Select all the frames from frame 1 to 20 right click and choose Create Motion Tween. Run the movie <p><i>(½ mark for each correct step)</i> <i>(Full marks to be awarded for any other correct equivalent way like shape tweening for the same animation)</i></p>	
3	Answer the following questions based on HTML:	
(a)	Write the name of tag and attribute to create a radio button in a form	2
Ans	<p>Tag: INPUT Attribute: TYPE <i>(1 mark for correct tag)</i> <i>+(1 mark for correct attribute)</i></p>	
(b)	<p>Write the HTML code to generate a Web Page in the format given below:</p> 	8

	<p>Consider the following while writing the HTML code:</p> <ol style="list-style-type: none"> Title of the page should be "Open Source Initiative". Heading of the page is "Brown". Picture used in the page is the file "OSI.jpg". Text in paragraph is red. Table should have a border of width 1, border of the table should be "green". Image used in the table are: img1.jpg, img2.jpg, img3.jpg, img4.jpg Pages linked to: <ul style="list-style-type: none"> Open Source Initiative Trademark Policy as "trade.html". Usage That Does not Require Written Permission as "perm.html". Usage That Requires Prior Written Approval as "prior.html". Bottom message is of 2 and is mail linked to contact@abc.com. 	
<p>Ans</p>	<pre> <HTML> <HEAD> <TITLE>Open Source Initiative</TITLE> <!-- 1 --> </HEAD> <BODY> <CENTER> <!-- 2a --> <H1>Open Source Initiative</H1> </CENTER> <!-- 3 --> <!-- 2b --> OSI was jointly founded by Eric Raymond and Bruce Perens in late February 1998 with Raymond as its first president Perens as vice-president and
an initial Board of Directors including Brian Behlendorf Ian Murdock Russ Nelson, and Chip Salzenberg.
 OSI Trademark Guidelines Open Source Initiative Trademark Policy <!-- 5 --> Usage That Does Not Require written Policy <UL type="circle"> <!-- 6 --> Noncommercial and community web sites Business web site Usage that Requires Prior Written Approval <CENTER> <CAPTION>Bad Logo Usage </CAPTION> <TABLE BORDER=1 BORDERCOLOR="green"> <!-- 7a 7b --> <TR><TD></TD> <TD>Never Stray from the Color Palatte</TD> </TR> <TR><TD></TD> <!--8a--> </pre>	

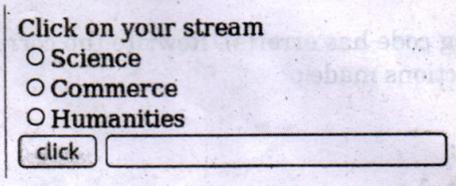
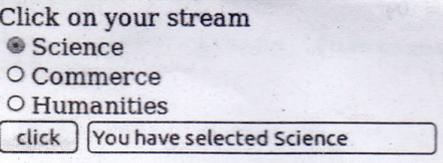
	<pre> <TD>Never Switch the Colors </TD> </TR> <TR><TD></TD> <TD>Do not change spacing,alignment of the design elements </TD> </TR> <TR><TD></TD> <!--8b--> <TD>Never stretch or Distort the Logo </TD> </TR> </TABLE> For more details <!-- 9a --> For more detail Mail to us <!-- 9b --> </BODY> </HTML> (1 mark for correct use of <TITLE> tag) +(1 mark for correct use of tag with COLOR attribute) +(1 mark for correct use of tag) +(1 mark for correct use of <A> tag for linking) +(1 mark for correct use of / tags for creating lists) +(1 mark for correct use of <TABLE> tag with BORDER and BORDERCOLOR attribute) +(1 mark for correct use of <TR>/<TD> tag) +(1 mark for bottom message [½ for font and ½ for mailto]) Note: • Nesting to be ignored • Use of TH instead of TD is acceptable </pre>	
4	Answer the following questions based on PHP:	
	<p>(a) Identify the errors and rewrite the following code underlying the changes:</p> <pre> <? PHP for (\$x==0; \$x<=8; \$x++) { if (\$x == 6) { continue; } echo \$x; } > </pre>	2
Ans	<pre> <? <u>php</u> for(<u>\$x=0</u>; \$x<=8; \$x++) { <u>if</u>(\$x == 6) { continue; } echo \$x; } <u>l</u> <u>?></u> </pre> <p>(½ Mark for identifying and correcting any of the four errors)</p> <p>NOTE: (1 Mark for only identifying any four errors without correction)</p>	

	(b)	(i) What is a constant? Declare a constant MAX assign the value 15.	2
	Ans	Constant is the value that does not change throughout the execution of script. define("MAX" , 15); <i>(1 mark for definition of constant)</i> + <i>(½ mark for proper declaration using the keyword define)</i> + <i>(½ mark for assignment of value)</i>	
		(ii) Write any two features of PHP.	1
	Ans	<ul style="list-style-type: none"> • It is an open source scripting language • PHP can run on various platforms such as windows, linux, unix Mac Os etc. • Dynamically edit, change or add any content of a web page. • It can add, delete, modify, access data in any database. • Provide security by encrypting data <p><i>(1 Mark for any two correct features)</i></p> <p><i>Note : 1 mark for any other relevant features</i></p>	
	(c)	Write any two points of difference between echo and print statements.	2
	Ans	<p>Echo: 1.echo has no return type. 2. echo takes multiple arguments/parameters. 3. It is faster than print.</p> <p>Print: 1. print has a return value of 1. 2. print takes only one argument. 3. It is slower than echo.</p> <p><i>(1 mark for each correct difference)</i></p> <p>Note:</p> <ul style="list-style-type: none"> • 1 mark each for any other valid differences • 1 mark to be awarded if the child has written 2 points of any one statement 	
	(d)	Give the output of the following statements: (i) echo substr("Multimedia and Web Technology", 0,2); (ii) echo 20+(3+5)%2; (iii) echo date("M-d-Y" , mktime(0,0,0,14,1,2001));	3
		<p>(i) Mu <i>(½ marks to be awarded for Mu)</i></p> <p>(ii) 20</p> <p>(iii) Feb-01-2002</p> <p><i>(1 mark for each correct answer)</i></p>	
5		Answer the following questions based on PHP:	
	(a)	Write the output of the following code: <pre><?php \$fruits = array ("mango", "apple", "pear", "peach") ; \$fruits = sort(\$fruits); for (\$x = 0; \$x<=3; \$x++) echo (\$fruits[\$x]. "
"); ?></pre>	2

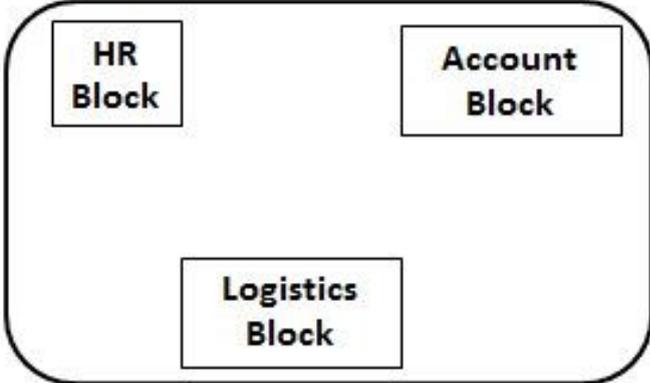
	<p>Ans apple mango peach pear <i>(2 mark for correct output)</i> <i>Note: ½ Mark for each correct output</i></p>	
	<p>(b) Write the name of the PHP built-in function: (i) To return reverse of a string (ii) To format a local time/date</p>	2
	<p>Ans (i) strrev() (ii) date() or stringdate() <i>(1 mark each for correct function name)</i> <i>Note: ½ for mktime in the part (ii)</i></p>	
	<p>(c) Following is the code to create a connection to the server and to create a database named DB1 in mySql. Fill in the blanks to complete the code :</p> <pre> <?php \$servername = "localhost"; \$username = "username"; \$password = "password"; // Create connection \$conn = mysqli _ _____ (<\$servername, \$username. _____) ; // Check connection if _____ { die("Connection failed: " . mysqli_connect_error ()); } //Create database \$sql = " _____ DATABASE DB1"; if (mysqli_query(\$conn, _____)) { echo "Database created successfully"; } else { echo "Error creating database: " . mysqli_error (\$conn); } mysqli_close (_____); ?> </pre>	3
	<p>Ans connect \$password !\$conn CREATE \$sql \$conn <i>(½ mark for each correct value)</i></p>	
	<p>(d) Create a text file named try.txt using PHP and write the following lines into it: Hello students! How are you? All the best for exams. Then write the code to count the number of vowels in it.</p>	3

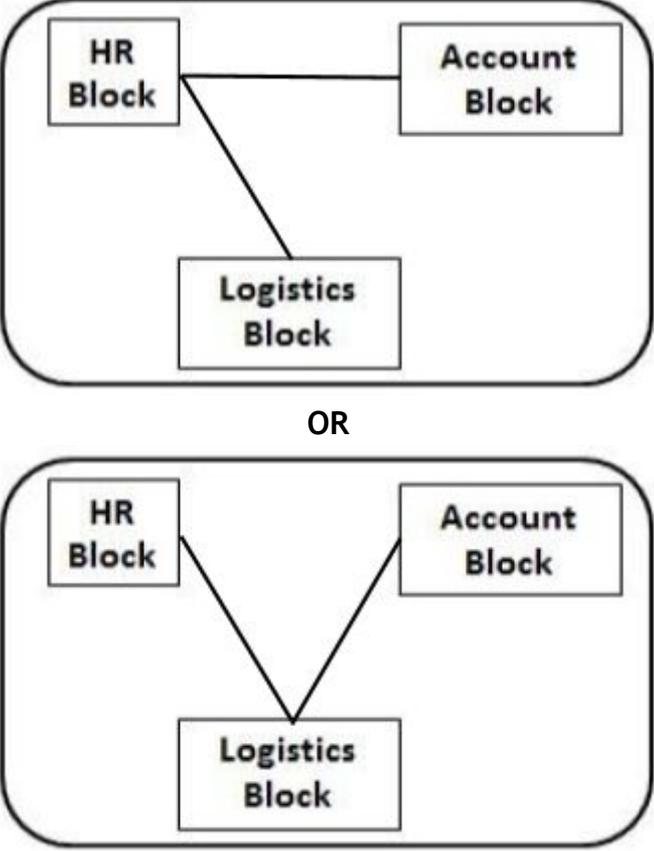
Ans	<pre> <? php \$file = fopen("try.txt" , "w"); // ½ \$text = "Hello students ! \n"; // ½ fwrite(\$file, \$text); // ½ \$text = "How are You ?\n"; fwrite (\$file, \$text); \$text = "All the best for the exams.\n"; fclose(\$file); \$file = fopen("try.txt" , "r"); // ½ \$count = 0; while (! feof (\$file)) // ½ { // OR \$p = fgetc(\$file); // ½ \$p = strtolower (\$file); // strtoupper if ((\$p == "a") (\$p == "e") (\$p == "i") (\$p == "o") (\$p == "u")) // ½ \$count = \$count + 1; } echo ("Number of vowels is : " . \$count); fclose(\$file); ?> </pre> <p><i>(Full 3 Marks to be given if file opened in w or a mode, assigned the text and written the text into the file)</i></p> <p>OR</p> <p><i>(Full 3 Marks to be given if file opened in r mode, checked end of file, read character from file, checked if it vowel or not, displayed the count of Vowels)</i></p> <p>OR</p> <p>Part marking - Not exceeding 3 Marks</p> <p><i>(1 mark for correct use of fopen() function)</i> <i>(1 mark for correct use of fwrite() function)</i> <i>(1 mark for correct use of while)</i> <i>(1 mark for correct use of fgetc() function)</i> <i>(1 mark for correct use of if else)</i> <i>(1 mark for correct use of fclose() function)</i></p>	
6	Answer the following questions based on JavaScript:	
(a)	<p>The following code has error(s). Rewrite the correct code underlining all the corrections made:</p> <pre> var j; var i =15; var flag = 1; while (j = 2 j < i; j++) { if (i % j = 0) { flag==0; break; } } </pre>	2

<p>Ans</p>	<pre> var j; var i =15; var flag = 1; <u>for</u> (j = 2; j < i; j++)//Error Correction 1 and 2 { if (i % <u>j==0</u>) //Error Correction 3 { <u>flag=0</u>; //Error Correction 4 break; } } OR var j; var i =15; var flag = 1, <u>j=2</u>;//Error Correction 1 while (<u>j < i</u>) //Error Correction 2a { if (i % j == 0)//Error Correction 3 { <u>flag=0</u>; //Error Correction 4 break; } <u>j++</u>; //Error Correction 2b } (<i>½ mark for each correction underline</i>) </pre>	
<p>(b)</p>	<p>Rewrite the given code using switch....case:</p> <pre> var x, y ,z ,w; x=0; y=0; z=0; w=0; if (a==1) x++; else if(a==2) y++; else if(a==3) z++; else w++; </pre>	<p>2</p>
<p>Ans</p>	<pre> var x, y, z, w; x = 0; y = 0; z = 0; w = 0; switch(a) { case 1:x++ ; break ; case 2:y++ ; break ; case 3:z++; break; default:w++; } </pre>	

	<p><i>(2 marks for correct answer)</i> <i>½ mark for correct use of switch</i> <i>½ mark for correct use of case</i> <i>½ mark for correct use of break</i> <i>½ mark for correct use of default)</i></p>	
(c)	Write the values of c and d after execution of the following code:	2
	<pre>var a = 1; var b = 2; var c; var d; c = ++b; d = a++; c++;</pre>	
Ans	<p>c= 4; d=2 ; <i>(1 mark for each correct output)</i></p>	
(d)	<p>Write HTML coding with form and Javascript to display the output as shown:</p>  <p>When the user selects his stream and clicks on the button, then his choice should be displayed as shown:</p> 	4
Ans	<pre><script language = "JavaScript"> function calc() { if(document.getElementById('button1').checked == true) document.f1.t1.value = "You have selected Science"; else if (document.getElementById('button2').checked == true) document.f1.t1.value = "You have selected Commerce" ; else document.f1.t1.value = "You have selected Humanities"; } </script> </head> <body> <form name = "f1"> <input type = "radio" id="button1" name=opt>Science
 <input type = "radio" id="button2" name=opt>Commerce
 <input type = "radio" id="button3" name=opt>Humanities
 <input type = "button" value = "Click" onclick = "calc()"> <input type = "text" name = "t1"> </form> </body></pre> <p>OR</p>	

	<pre> <script language = "JavaScript"> function calc() { if(document.f1.opt.value == "Science") document.f1.t1.value = "You have selected Science" ; else if (document.f1.opt.value == "Commerce") document.f1.t1.value = "You have selected Commerce" ; else document.f1.t1.value = "You have selected Humanities" ; } </script> </head> <body> <form name = "f1"> <input type="radio" id="button1" name=opt value="Science"> Science
 <input type="radio" id="button2" name=opt value="Commerce">Commerce
 <input type="radio" id="button3" name=opt value="Humanities">Humanities
 <input type="button" value="Click" onclick="calc()"> <input type="text" name="t1"> </form> </pre> <p><i>(½ mark for correct declaration of function) +(1 mark for correct if else statement) +(1 mark for correctly displaying the message in the textbox) +(½ mark for correct use of <FORM> tag) +(½ mark for correct use of radio button) +(½ marks for correct usage of onClick event)</i></p> <p>Note: Full Marks to be awarded for any alternative method of extracting data from the form (other than getElementById)</p>	
7	Answer the following questions based on Communication and Network concepts:	
	(a) When is a repeater used in a computer network?	1
Ans	<p>It regenerate the signal over the same network before the signal becomes too weak or corrupted so as to extend the length to which the signal can be transmitted over the same network. It do not amplify the signal. When the signal becomes weak, it copies the signal bit by bit and regenerate it at the original strength.</p> <p>OR</p> <p><i>A repeater is used whenever the distance becomes more than 70m (1 mark for correct answer)</i></p>	
	(b) Write the full form of GPS	1
Ans	<p>General Pocket Radio Service</p> <p><i>(1 Mark for correct full form)</i></p>	
	(c) Amit and John have connected their mobile phones to transfer a song. (i) what type of network is formed? (ii) which communication media out of coaxial cable, bluetooth and satellite link should they use to transfer the file?	2

Ans	(i) PAN (ii)Bluetooth <i>(1 mark for each correct answer)</i>									
(d)	Explain the following terms: (i) IP Address (ii) Video Conferencing	2								
Ans	(i) It is a unique identifying number for each computer on the network that uses internet protocol for communication (ii) It is a live ,visual connection between two or more people residing in separate locations for the purpose of communication. <i>(1 mark for correct definition of each term)</i>									
(e)	<p>Hi Speed Technology Ltd. is an Delhi based organization which is expanding its office setup to Chandigarh. At Chandigarh office campus, they are planning to have 3 different blocks for HR, Account and Logistics related work. Each block has a number of computers which are required to be connected in a network for communication, data resource sharing.</p> <p>As a network consultant , you have to suggest that best network related solutions for them for issues/problems raised in (i) to (iii)keeping in mind the distance between various blocks/locations and other given parameters.</p> <p>CHANDIGARH Office</p>  <p>Shortest distance between various blocks/locations:</p> <table border="1" data-bbox="237 1599 1115 1863"> <tr> <td>HR Blocks to Accounts Block</td> <td>400 metres</td> </tr> <tr> <td>Accounts Block to Logistics Block</td> <td>200 meters</td> </tr> <tr> <td>Logistics Block to HR Block</td> <td>150 meters</td> </tr> <tr> <td>DELHI Head Office to CHANDIGARH Office</td> <td>270 km</td> </tr> </table>	HR Blocks to Accounts Block	400 metres	Accounts Block to Logistics Block	200 meters	Logistics Block to HR Block	150 meters	DELHI Head Office to CHANDIGARH Office	270 km	
HR Blocks to Accounts Block	400 metres									
Accounts Block to Logistics Block	200 meters									
Logistics Block to HR Block	150 meters									
DELHI Head Office to CHANDIGARH Office	270 km									
	<p>Number of Computers installed at various blocks are as follows:</p> <table border="1" data-bbox="237 1944 1121 2085"> <tr> <td>HR Block</td> <td>70</td> </tr> <tr> <td>Accounts Block</td> <td>50</td> </tr> <tr> <td>Logistics Block</td> <td>40</td> </tr> </table>	HR Block	70	Accounts Block	50	Logistics Block	40			
HR Block	70									
Accounts Block	50									
Logistics Block	40									

	(i) Suggest the most appropriate block/location to house the SERVER in the CHANDIGARH Office (out of the 3 blocks) to get the best and most effective connectivity. Justify your answer.	1
Ans	HR Block as it has the maximum number of computers installed in it.	
	<i>(½ mark for correct Name of the block)</i> <i>(½ mark for correct Justification)</i>	
	(ii) Suggest the best wired medium and draw the cable layout (Block to Block) to effectively connect various blocks within the CHANDIGARH office compound.	2
Ans	<p>Optical fiber/Cat5/Cat6/Ethernet cable and Star topology</p> <div style="text-align: center;">  <p>OR</p> </div> <p><i>(1 mark for correct wired medium name)</i> <i>+(1 mark for drawing correct cable layout/topology)</i></p>	
	(iii) Suggest a device/software and its placement that would provide data security for the entire network of the CHANDIGARH office.	1
Ans	<p>Firewall in the HR Block OR Switch in each block OR Antivirus software in each block</p> <p><i>(½ Mark for the correct name of the device/software)</i> <i>+(½ mark for the placement of the device/software)</i></p>	