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Marking Scheme
Multimedia and Web Technology
Class: XII
Session 2017-18

<table>
<tr><td>Q1(a)</td><td>Shreya wants to work on a database management software. Suggest her any two examples of common database management system.</td><td>1</td></tr>
<tr><td>Ans</td><td>MySQL, MS Access, MS-SQL Server, Oracle etc.
(½ mark each for any two example)</td><td></td></tr>
<tr><td>(b)</td><td>What is field in a database? Give an example.</td><td>1</td></tr>
<tr><td>Ans.</td><td>The column of a table is known as field.
Example: EmpNo, EmpName etc.
(½ mark for correct answer)
(½ mark for any one example)</td><td></td></tr>
<tr><td>(c)</td><td>Define and identify the primary key in the following table:
Table: Stationary
<table>
<tr><th>S_No</th><th>S_Name</th><th>S_Qty</th><th>PurchaseDate</th></tr>
<tr><td>101</td><td>Pen</td><td>102</td><td>2011-12-12</td></tr>
<tr><td>102</td><td>Pencil</td><td>201</td><td>2013-02-21</td></tr>
<tr><td>103</td><td>Eraser</td><td>90</td><td>2011-09-09</td></tr>
<tr><td>109</td><td>Sharpener</td><td>90</td><td>2012-08-31</td></tr>
<tr><td>113</td><td>Clips</td><td>900</td><td>2011-09-09</td></tr>
</table></td><td>2</td></tr>
<tr><td>Ans.</td><td>An attribute or set of attributes which are used to identify a tuple uniquely is known as Primary key.
Primary key: S_No or S_Name
(1 mark for correct definition)
(1 mark for identification of primary key)</td><td></td></tr>
<tr><td>(d)</td><td>Shweta wants to delete the records where the "FirstName" is "Rahul" in the ‘Emp’ Table. She has entered the following SQL statement. An error is being displayed. Rewrite the correct statement.
DELETE ‘Rahul’ FirstName FROM Emp;</td><td>1</td></tr>
<tr><td>Ans</td><td>DELETE FROM Emp WHERE FirstName = 'Rahul';
OR
DELETE FROM Emp WHERE FirstName like 'Rahul'
(1 mark for correct answer)</td><td></td></tr>
<tr><td>(e)</td><td>Differentiate between JPEG and GIF image.</td><td>2</td></tr>
<tr><td>Ans.</td><td>
<table>
<tr><th>JPEG image</th><th>GIF Image</th></tr>
<tr><td>1. JPEG stands for Joint Photographic Experts Group.</td><td>1. GIF stands for Graphic Interchange Format.</td></tr>
<tr><td>2. JPEG images being static images does not allow animation.</td><td>2. GIF allows animation.</td></tr>
<tr><td>3. JPEG images are good for displaying real world photographs.</td><td>3 GIF is best for images that have solid colors, text and line art.</td></tr>
<tr><td>4. JPEG files are more compressed than GIF files hence JEPG files are more compact than GIF files.</td><td>4. GIF files are less compressed hence take more storage space.</td></tr>
</table></td><td></td></tr>
</table>

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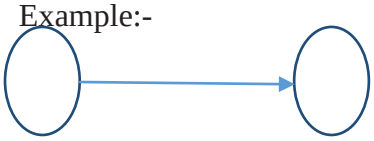
<table>
<tr><td></td><td>(1 mark each for any two correct difference)</td><td></td></tr>
<tr><td>(f)</td><td>Explain the term “Publishing a Flash Movie”? Name the extension of the file created when a Flash movie is published using a Macintosh projector.</td><td>2</td></tr>
<tr><td>Ans.</td><td>Publishing is the process of preparing movie files to be uploaded on the website for users by converting the Flash .FLA file to another format like .swf, .html etc
The extension of the file created when a Flash movie is published using a Macintosh projector is .hqx.

(1 mark for correct explanation)
(1 mark for correct extension)</td><td></td></tr>
<tr><td>(g)</td><td>Mention any one use of Multimedia in healthcare.</td><td>1</td></tr>
<tr><td>Ans.</td><td>• Doctors can be trained by looking at a virtual surgery
• They can simulate how human body is affected by diseases spread by viruses or bacteria.
(1 mark for any one use)</td><td></td></tr>
<tr><td>Q2</td><td>Answer the following question based on Macromedia Flash:</td><td></td></tr>
<tr><td>(a)</td><td>What is Frame rate?</td><td>1</td></tr>
<tr><td>Ans.</td><td>Frame rate is used to set the speed of animation. If frame rate is low then animation will be slow otherwise it is fast. Frame rate is expressed in frames per second (FPS).

(1 mark for the correct answer)</td><td></td></tr>
<tr><td>(b)</td><td>Differentiate between Motion Tweening and Shape Tweening.</td><td>2</td></tr>
<tr><td>Ans.</td><td>
<table>
<tr><th>Motion Tweening</th><th>Shape Tweening</th></tr>
<tr><td>1. Motion tweening is used to change the position of an object over time.</td><td>1. Shape tweening is used to change the shape of an object.</td></tr>
<tr><td>2. Motion tween works only with symbols.</td><td>2. Shape tween works with any object.</td></tr>
<tr><td>3. Example:-
  </td><td>3. Example:-
 </td></tr>
</table>
(1 mark each for any two correct differences)</td><td></td></tr>
<tr><td>(c)</td><td>Name any two movie file formats.</td><td>1</td></tr>
<tr><td>Ans.</td><td>Movie file formats are:- AVI, MPEG, MOV, SWF, DAT
(½ marks each for any two correct Movie Format)</td><td></td></tr>
<tr><td>(d)</td><td>Define layer. Write one advantage of using layers in Flash.</td><td>2</td></tr>
<tr><td>Ans.</td><td>A layer is like a transparent sheet stacked on top of each other which may contains different scenes of a flash movie.
Advantage: - It is used to organise the artwork, photographs, text and animation in a single file.
(1 mark for correct definition)
(1 mark for Advantage)</td><td></td></tr>
<tr><td>(e)</td><td>Observe the figure given below and do as directed:
 </td><td>4</td></tr>
</table>

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	• The object on the left hand side shows the position and size of the image for frame 1. The colour of the object is blue. • The object on the right hand side shows the position and size of the image for frame 20. The colour of the object is green. • The circle on frame 1 moves and transforms into an ellipse on frame 20. Write the procedure and property settings for animating the above scenario.	
Ans.	The following steps have to be followed to animate the given scenario: • Select frame 1 from the timeline. • Create the blue coloured object given on the left hand side. • Select frame 20 and insert a Keyframe. • Reposition the object by dragging from left hand side to right hand side. • Change the size and shape of the object using Free Transform tool. • Change the colour of the object by using fill color from the toolbox. • Click on anywhere between frame 1 and frame 20. • Select shape tween from properties palette. ***(½ mark for each correct step)*** ***(full marks for any other correct equivalent way for the same animation)***	½ x 8 = 4
Q3	**Answer the following questions based on HTML**	
(a)	Write the HTML command to create a button in a form with the caption "Click Me"	1
Ans.	<INPUT TYPE="BUTTON" VALUE="Click Me"> ***(½ mark for naming the <INPUT> tag)*** ***(½ mark for TYPE & VALUE attributes)***	
(b)	Identify the errors in the following HTML code. Also write the correct code. <OL TYPE= "a" START= "f">	1
Ans	The start attribute should be assigned a numeric value. Correct code is: <OL TYPE= "a" START=6> ***(½ mark for identification of error)*** ***(½ mark for correction)***	
(c)	Write the HTML code to generate a Web Page in the format given below: **Consider the following while writing the HTML code:** • Title of the page should be "Handmade Cards". • Background colour should be "Pink". • Text style of the main heading should be "Arial Bold" and color should be red. • Image used is "cards.jpg". • Table in the center of the webpage and should have a 3 pixel thick border of color green and the spacing between cell content and border is 10 pixels. • Use the concept of nested lists for creating the specified lists. • The bottom image (link.jpg) and the text "Personalize The Card" are links to another page "person.html".	8

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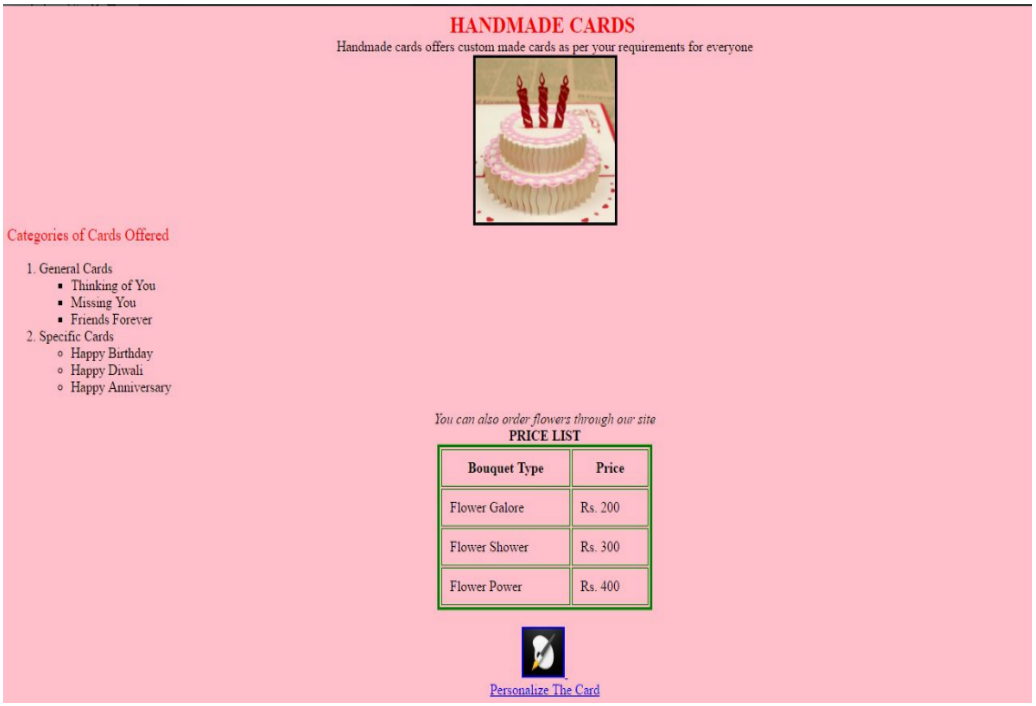

Ans.

```
<html>
<head>



<title> Handmade Cards </title>
</head>



<body bgcolor="pink">
<center>



<font face="Arial Bold" size="5" color ="Red">
<b>HANDMADE CARDS</b>
</font>
<br>
<font size=3>Handmade cards offers custom made cards as per your requirements for
everyone </font><BR>

<img src ="cards.jpg" border ="3" height=175 width=175>
</center>
<font face = "Arial Bold" size=4 color="Red">
Categories of Cards Offered</font>
<font size=3>

<ol type = 1>
```

½ mark for <HTML> &<BODY > tags

½ mark for correct use of **<TITLE>** tag

½ mark for **BGCOLOR** attribute of <BODY> tag)

1 mark for using <FONT> tag with **face & color attribute**

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```
        <li> General Cards </li>
                <ul type="square">
                <li> Thinking of You </li>
                <li> Missing You </li>
                <li> Friends Forever </li>
                </ul>
        <li> Specific Cards </li>
                <ul type ="circle">
                <li> Happy Birthday </li>
                <li> Happy Diwali </li>
                <li> Happy Anniversary </li>
                </ul>
</ol>
<i><center>You can also order flowers through our site</center></i>
<table width =20% align = center border = 3 bordercolor = green cellpadding = 10
cellspacing = 2>
```

1 mark for correct use of **<IMG>** tag with **height, width, border**

(1 mark for proper use of list and TYPE attributes)

```
<caption>
    <b>PRICE LIST</b>
</caption>

    <tr>
      <th> Bouquet Type </th>
      <th> Price </th>
    </tr>
    <tr>
       <td> Flower Galore </td>
       <td> Rs. 200 </td>
    </tr>
    <tr>
        <td> Flower Shower </td>
        <td> Rs. 300 </td>
    </tr>
    <tr>
        <td> Flower Power </td>
        <td> Rs. 400 </td>
    </tr>
    </table>
    <br>
    <center>
    <a href ="person.html">
    <img src = "link.jpg" border = 2 height=50 width=50>


    <br>
    Personalize The Card
    </a>
    </center>
    </font>
    </body>
```

1 mark for using **<TABLE >** tag with ALIGN, BORDER, BORDER COLOR, CELLPADDING

½ mark for use of **<CAPTION>**tag

½ mark for proper use of **<TR>, <TH> & <TD>** tag

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	</html> ***(½ mark for correct use of <HTML> and <BODY> tags)*** ***(½ mark for correct use of <TITLE> tag)*** ***(½ mark for BGCOLOR attribute of <BODY> tag)*** ***(1 mark for correct use of <FONT> tag with face & color attribute)*** ***(1 mark for correct use of <IMG> tag with height, width, border)*** ***(1 mark for correct use of list and TYPE attributes)*** ***(1 mark for using <TABLE> tag with ALIGN,BORDER, BORDERCOLOR,CELLPADDING)*** ***(½ mark for correct use of <CAPTION>tag)*** ***(½ mark for proper use of <TR>, <TH> & <TD> tag)*** (½ mark for use of <**CENER**> tag) ***(1 mark for proper use of <A> tag with HREF attribute)***	½ mark for use of <**CENER**> tag ½ mark for proper use of <**A**> tag with **HREF** attribute
Q4.	**Answer the following questions based on PHP:**	
(a)	Write any two features of PHP.	1
Ans.	Two features of PHP are:- 1. PHP is platform independent i.e PHP code runs on various platforms like Linux, Unix, Windows etc. 2. PHP is server-side script and executes on web server. ***(½ marks each for any two correct PHP features)***	

(b)	Write the output of the given code:
	<?php
	$sum=0;
	for($a=1; $a<=8; $a +=2)
	$sum = $sum + $a;
	echo($sum);
	echo("
	");
	echo($a);
	?>
		2

Ans.	16 9 ***(1 mark for each line of output)*** ***(Deduct ½ mark if line break is not considered)***	
(c)	What is a constant? Declare a constant MAX and assign the value 10.	2
Ans.	A constant is a name or an identifier whose value is fixed and cannot change during the execution of the program. define('MAX',10); ***(1 mark for correct definition of constant)*** ***(1 mark for declare a constant MAX with value 10)***	
(d)	Give output of the following statements: (i) echo 10/5+2*4%8; (ii) echo strtolower("PRODUCT ACTIVATED"); (iii) echo date("M-d-Y", mktime(0,0,0,8,42,2017));	3

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Ans.	(i) 2 (ii) product activated (iii) Sep-11-2017 ***(1 mark for each correct output)***	

(e)	Rewrite the following code using switch case
	`if($Type=='T')`
	`  echo "DISCOUNT ON TV";`
	`else if($Type=='M')`
	`  echo "DISCOUNT ON MOBILE PHONE";`
	`else if($Type=='C')`
	`  echo "DISCOUNT ON CAMERAS";`
	`else`
	`  echo "NO DISCOUNT";`
		2

Ans.	`switch($Type)`
	`{`
	`case 'T': echo "DISCOUNT ON TV";`
	`break;`
	`case 'M' : echo "DISCOUNT ON MOBILE PHONE";`
	`break;`
	`case 'C' : echo "DISCOUNT ON CAMERAS";`
	`break;`
	`default : echo "NO DISCOUNT";`
	`}`
	(½ mark for each correct case)
	(Deduct ½ mark if break is not considered)	

Q5.	**Answer the following questions based on PHP:**	
(a)	What is PHP global variable $_REQUEST?	1
Ans.	**$_REQUEST** is a super global variable which is used to collect data after submitting an HTML form. ***(1 mark for correct answer)***	

(b)	Following is the code to count total number of characters from a text file. Fill in the blanks so that this code can work:
	`<? php`
	`$file = _____("data.txt", "r");`
	`$ch = 0;`
	`while(_____($file))`
	`{`
	`$letter= _____;`
	`$ch = _____;`
	`}`
	`echo "Number of characters:", $ch;`
	`fclose($file);`
	`?>`
		2

Ans.	`<? Php`
	`$file = fopen("data.txt", "r");`
	`$ch = 0;`
	`while(!feof($file))`
	`{`
	`$letter=fgetc($file);`
	`$ch=$ch+1;`
	`}`
	`echo "Number of characters:", $ch;`
	`fclose($file);`
	`?>`	

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	(1/2 mark each for the correct answer)	

(c)	Rewrite the following code after removing errors with each correction underlined.
	<?
	value=5;
	while($value!= =0)
	{
	$r_digit=$value%10;
	$value/=10;
	}
	ECHO $r_digit;
	?>
		2

Ans.	<?**php**
	$value=0;
	while($value**!=0**)
	{
	$r_digit=$value%10;
	$value/=10;
	}
	echo $r_digit;
	?>
	(½ mark for correcting each error)	

(d)	Name the built-in functions to be used in the following situations: (i) To remove backslash from a string. (ii) To return number of days in a month for specified year.	2
Ans.	(i) stripslashes() (ii) cal_days_in_month() ***(1 mark for each correct function name)***	
(e)	What is a cookie? Write the PHP code to set a cookie named "car" and value "BMW". The cookie should expire after two days. Also Display the value stored in $_COOKIE	3

Ans.	A cookie is a small piece of data that the web server sends to a web browser so that the web server can keep track of user's activity on a particular website.
	When a user uses a computer to visit a website, the website stores some basic information about the visit on the hard disk of the computer. It records the user's preferences while using the site. This stored information is called a 'cookie'.
	
	<?php
	$cookie_name = "car";
	$cookie_value = "BMW";
	setcookie($cookie_name, $cookie_value, time() + (86400 * 2), "/"); // 86400 = 1 day
	?>
	<html>
	<body>
	
	<?php
	if(!isset($_COOKIE[$cookie_name])) {
	echo "Cookie named '" . $cookie_name . "' is not set!";
	} else {
	echo "Cookie '" . $cookie_name . "' is set!
	";
	echo "Value is: " . $_COOKIE[$cookie_name];
	}	

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	?> </body> </html> ***(1 mark for correct definition of cookie)*** ***(1 mark for correct use of setcookie() function)*** ***(1 mark for displaying the value stored in $_COOKIE)***	
Q6	**Answer the following questions based on JavaScript:**	

(a)	Write the code using do while loop without effecting the output:
	<script language="javascript">
	var prod,b;
	prod=1;
	for(b=1;b<=10;b+=3)
	{
	document.write(b);
	prod=prod+b*b;
	}
	document.write("the final product is" & prod);
	</script>
		2

Ans.	<script language="javascript">
	var prod,b;
	prod=1;
	b=1;
	do
	{
	document.write(b);
	prod=prod+b*b;
	b+=3;
	}while(b<=10);
	document.write("the final prod is" & prod);
	</script>
	(½ mark each for block { } statements)
	(½ mark for correct do…while)	

(b)	Explain Conditional operator with the help of an example.	2
Ans.	It is also known as Ternary operator as it requires 3 operands. It checks the condition, if it is evaluated as true it goes to True part else the False part. Syntax: **Condition?True:False** Example:- Ans=(x>y?x:y); If x=5 and y=3 As x>y i.e. 5>3 condition is true, Ans. is assigned the value of x, else Ans will get the value of y. ***1mark for explanation*** ***1 mark for correct example*** ***OR*** ***Full 2 marks if the difference is explained only with the help of an example)***	

(c)	Analyse the given program segment and determine how many times the loop will be executed. What will be the value of A after loop is terminated.
	var A , B;
	A = 5;
	B = 10;
	while(A>=1)
	{
	document.Write(A+B);
	A = A - 1;
		2

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	B = B – 2; }	
Ans.	Loop will execute 5 times. Value of A after the loop terminates is 0. ***(1 mark each for correct answer)***	
(d)	Write the code to display a form as shown below along with the javascript code to achieve the specified task. User should be able to enter the number of calls and the total amount payable gets displayed when he presses "calculate" button. The total amount payable will be calculated based on the following rate list: Rs. 1.00 per call for the 1st 100 calls Rs. 1.20 per call for the next 100 calls Rs. 1.50 per call for the next 50 calls Rs. 2.00 per call for more than 250 calls	4

Ans.	<html>
	<head>
	<SCRIPT language="javascript">
	function calc()
	{
	var consm, amount=0;
	consm=document.form1.f1.value;
	if(consm<=100)
	amount=consm*1.0
	else if(consm<=200)
	amount=100+1.2*(consm-100)
	else if(consm<=250)
	amount=100+1.2*100+1.5*(consm-200)
	else
	amount=100+ 1.2*100 + 1.5*50 +2.0 *(consm-250)
	document.write("amount payable is " + amount);
	}
	</SCRIPT>
	</head>
	<body>
	<form name="form1">
	NUMBER OF CALLS
	<input name=f1 type=text>
	
	<input type=button name=b1 onclick=calc() value=CALCULATE BILL>
	</form>
	</body>
	</html>
	
	(1 mark for form)
	(2 marks for function)
	(½ mark for handling ONCLICK( ) event)
	(½ mark for displaying output)	

Q7	**Answer the following questions based on Communication and network concepts:**	
(a)	How firewall protect our network?	1
Ans.	A firewall is a part of computer system or network that is designed to block	

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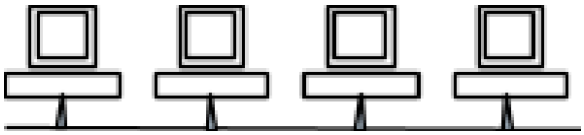
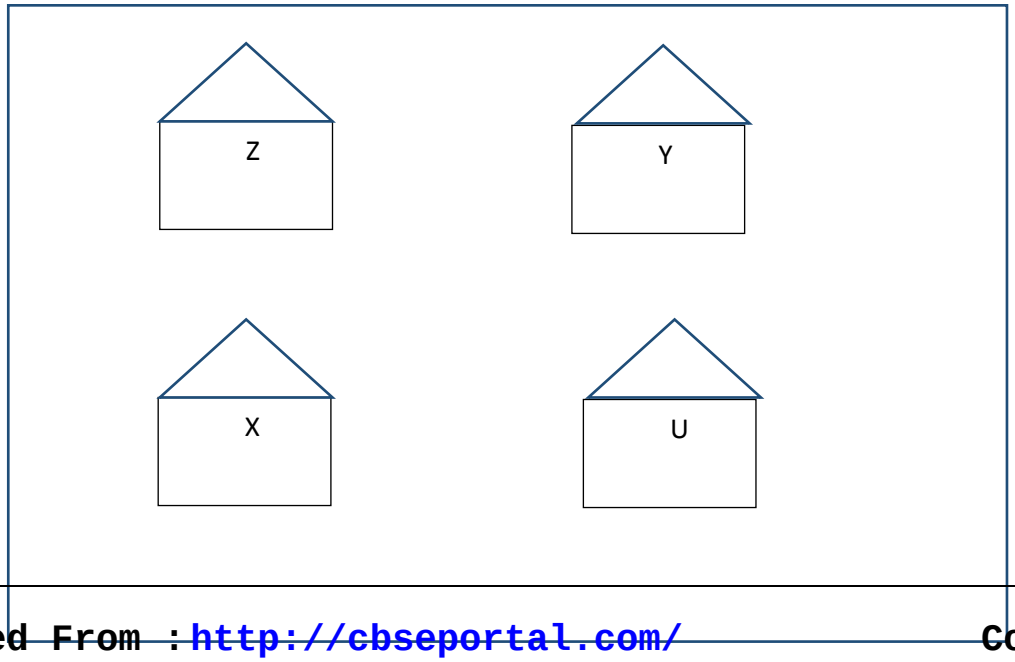
	unauthorized access while permitting authorized communications. It is a device or set of devices configured to permit, deny, encrypt, or proxy all(in and out) computer traffic between different security domains based upon a set of rules and other criteria. ***(1 mark for appropriate explanation)***	
(b)	Write one advantage of Bus Topology of network. Also, illustrate how 4 computers can be connected with each other using bus topology of network.	1
Ans.	Cable length required for this topology is the least compared to other networks. Illustration of 4 computers connected with each other using bus topology of network.  ***(½ Mark for writing one correct advantage)*** ***(½ Mark for drawing / writing correct illustration OR any other diagrammatic representation for star topology)***	
(c)	Explain the following terms: i. GSM ii. CDMA	2
Ans.	**GSM:** Global System for Mobiles, it is the international standard for wireless technology. GSM allows users to utilize one phone and one number in many countries throughout the world. **CDMA**: Code Division Multiple Access: a digital wireless telephony transmission technique. **CDMA** is an example of multiple access, where several transmitters can send information simultaneously over a single communication channel. ***(1 mark for each correct definition)***	
(d)	Write two advantages of using open source software over proprietary software.	1
Ans.	(i) Source Code available for modification and redistribution (ii) Freely available for usage ***(½ mark for each correct advantage)***	
(e)	What is the significance of UNICODE?	1
Ans.	UNICODE is a universal coding standard whose main objective is to enable a single, unique character set capable of supporting all characters from all scripts, as well as symbols, that are commonly utilized for computer processing throughout the globe. ***(1 mark for correct explanation)***	
(f)	The Cyber Skill Development Organisation has set up its new Branch at Nagaland for its offices and web based activities. It has 4 Wings of buildings as shown in the diagram 	

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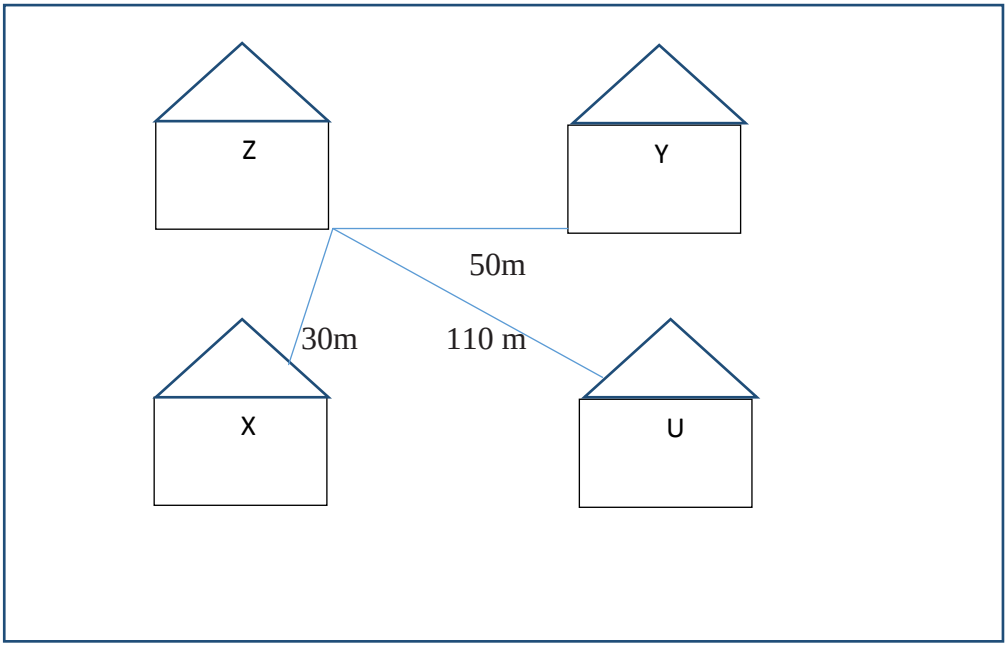
Center to center distance between various blocks

Wing X to Wing Z	30m
Wing Z to Wing Y	50m
Wing Y to Wing X	125m
Wing Y to Wing U	60m
Wing X to Wing U	155m
Wing Z to Wing U	110m

Number of computers

Wing X	40
Wing Z	120
Wing Y	30
Wing U	10

(i)	Suggest a most suitable cable layout of connections between the Wings and topology.	1
Ans.	(i) Most suitable layout  ***(1 mark for correct layout)***	
(ii)	Suggest the most suitable place (i.e, Wing) to house the server of this organization with a suitable reason with justification.	1
Ans.	Wing Z as it has largest number of computers. ***(½ mark for naming the correct block)*** ***(½ mark for correct justification)***	
(iii)	Suggest the placement of the following devices with justification: ○ Repeater ○ Hub/Switch	1
Ans.	A **repeater** needs to be placed along the wire between wings Z to U as the distance between them is more than 70 m. A **hub/switch** each would be needed in all the wings, to interconnect the group of cables from the different computers in each wing.	

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	(½ mark for correct placement) ***(½ mark for correct justification)***	
(iv)	The organization is planning to link its head office situated in Delhi with offices at Nagaland. Suggest an economic way to connect it; company is ready to compromise on the speed of connectivity. Justify your answer.	1
Ans.	TCP/IP Dial Up as it is an economic option with a reasonable speed. ***(½ mark for correct technology)*** ***(½ mark for correct justification)***	

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