Series BVM/C

Code No. 89

Roll No. ☐☐☐☐☐☐☐

Candidates must write the Code on the title page of the answer-book.

- Please check that this question paper contains **11** printed pages.

- Code number given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.

- Please check that this question paper contains **7** questions.

- **Please write down the Serial Number of the question before attempting it.**

- 15 minute time has been allotted to read this question paper. The question paper will be distributed at 10.15 a.m. From 10.15 a.m. to 10.30 a.m., the students will read the question paper only and will not write any answer on the answer-book during this period.

MULTIMEDIA AND WEB TECHNOLOGY

Time allowed : 3 hours *Maximum Marks : 70*

Note : *(i)* **All** *questions are compulsory.*

(ii) *Answer the questions after carefully reading the text.*

1. (a) Observe the tables SKILLS and COURSES of a Database named Digital Literacy given below carefully and answer the questions that follow :

Table : SKILLS

SkillID	SkillName	SkillCategory
101	Critical Thinking	Cognitive
102	Collaboration	Social
103	Curation	Cognitive
104	Creativity	Cognitive
105	Communication	Social

Table : COURSES

CourseCode	CourseName	SkillID	NoofRegistrations
C01	Language Skills	105	150
C02	Team Management Skills	102	200
C03	Design Thinking Skills	104	175
C04	Content Creator Skills	103	100
C05	Programming Skills	101	250

(i) Write the MySQL command to create the table SKILLS. *1*

(ii) What is the cardinality of the table COURSES ? *1*

(iii) Which attribute can act as the Foreign key for the table COURSES ? Write any one special characteristic of this key. *2*

(iv) Swarnima wants to display all the records from table COURSES where NoofRegistrations is more than 150. She has given the MySQL command shown below but it is showing error. Can you rectify the error and suggest the correct MySQL command to achieve the desired task ? *1*
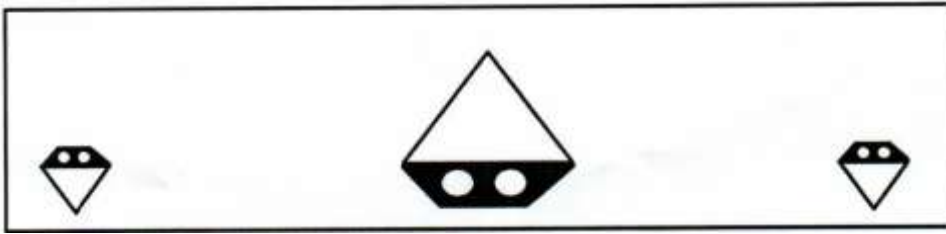
SELECT * WHEN NoofRegistrations > 150 FROM COURSES

(b) Arunima is a corporate lawyer who frequently misses her favourite TV shows due to her busy schedule. She wants to be able to view programs in real time or download programs and view them later. Which of the following multimedia technology will help her to achieve this ? *1*

(i) Virtual Reality

(ii) Video on Demand

(iii) Video Conferencing

(c) Amanvir has created a symbol in Flash which has its own independent timeline that plays independent of the main movie. Name the type of symbol he has created. *1*

(d) Out of AVI, MPEG4 and MOV, which file format has the features given below ? *1*

(i) It is a Compressed Video Format for Internet Sharing and Mobile Platform Compatibility.

(ii) It is best suited to share your video footage via YouTube or e-mail, or to store and play your videos on your mobile devices.

(iii) Since these files are so compressed, they are not recommended for editing or archiving.

(e) Give the full forms of the following : *2*

(i) JPEG

(ii) TIFF

2. Answer the following questions based on Macromedia Flash :

(a) Which of the following is a way to take a word and animate each letter separately ? *1*

(i) Distribute to layers

(ii) Break apart

(iii) Frame-by-frame

(iv) Convert to symbol

(b) Name the two tags used to insert a Flash movie into a HTML file. *2*

(c) Name the type of animation – Shape tweening, Motion tweening or Motion tweening with guide layer, that will be most suitable for the following situations : *3*

(i) Text "India" transforms into "Bharat"

(ii) A red cricket ball changes into a white cricket ball while rolling on the ground

(iii) A red cricket ball changes into a white cricket ball while travelling a curved path

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(d)   Observe the image given below and do as directed :

- The graphic on the left hand side shows the position and size for frame 1.
- The graphic in the middle shows the position and size for frame 25.
- The graphic on the right hand size shows the position and size for frame 50.
- The smileycone graphic used in the animation is saved in the flash library.

Write the procedure and property settings for animating the above scenario assuming the colour of the object remains the same.   *4*

3.   Answer the following questions based on HTML :

(a)   Name the HTML tag used for displaying a heading on a web page. How is it different from the <TITLE> tag ?   *2*

(b)   Write the HTML code to generate the web page in the format as shown.   *8*

Consider the following point while writing the code :

(i)   The background colour is "#FF77FF".

(ii)   The horizontal line is 4 pixels thick and RED in colour.

(iii)   The font used in the paragraph is size 4 and GREEN in colour.

(iv)   The table has a BLUE coloured border which is 3 pixels thick and a distance of 3 pixels is maintained in-between cells.

(v)   The images shown in the table are "scap.png.jpg" and "cjack.png".

(vi) A hyperlink should be provided for the website given at the bottom of the page.

<div style="background-color: yellow; border: 2px solid black; padding: 10px;">

Smart Dresses

We have special offers on various dresses
1. Men
    o 15% on all T Shirts
    o 20% on Formal Shirts
    o 25% on Jeans
2. Women
    o 15% on all T Shirts
    o 20% on lowers
Buy More and get gifts

Amount	Gift	Photo
2000	Star Cap	
5000	Cotton Jacket	

Visit us at http:\\www.smartdressesforall.com

</div>

4. Answer the following questions based on PHP :

(a) **$_GET** is an array of variables passed to the current scrip via the URL parameters. Which of the following statements is *false* about the GET method ?   *1*
   (i) The data sent by GET method is restricted to 1024 characters only.
   (ii) GET can be used to send binary data, like images or word documents, to the server.
   (iii) The data sent by GET method can be accessed using QUERY_STRING environment variable.
   (iv) The data sent by GET method is sent as name/value pairs.

(b) Name the two parameters required by the PHP fread() function.   *1*

(c) Name the inbuilt function used for the following :   *2*
   (i) To reverse a string
   (ii) Return the number of days in a month for a specified year and calendar

(d) Point out the errors in the following code. Rewrite the corrected code with corrections underlined. *2*

```php
<?php
    $s = array(10,20,21,25,27,33);
    for ($x=0, $x<6, $x++)
    {
        if ($s[$x]%2=0 && $s[$x]%5=0)
            $s[$x]= $s[$x+1];
        else
            $s[$x]--;
    }
    for ($x=0; $x<6; $x++)
    {
        display($s[$x]);
        echo("<br>");
    }
php?>
```

(e) Give the output of the following statements : *4*

(i) `echo (stripslashes ( "Cyber \Security \and \Online \Safety"))`

(ii) `echo 13 % 5 + 2 * 3 -10;`

(iii) `echo substr("Good Morning",strlen("Delhi"));`

(iv) `echo 10 * 3 / 5 + 4 ** 2;`

5. Answer the following questions based on PHP :

(a) Change the following code using do..while loop without affecting the output : *2*

```php
<?php
    $Total = 0;
    echo "Steps:";
    for ($Count=1; $Count<=7; $Count+=2)
    {   echo $Count."<BR>";
        $Total += 2*$Count;
    }
    echo ("Final Total: ".$Total);
?>
```

(b) Differentiate between the $_SESSION and the $_SERVER
superglobals of PHP.   *2*

(c) Study the code given below and answer the questions that follow :

```php
<?php
$fruits = array("lemon", "orange", "banana", "apple");
rsort($fruits);
foreach ($fruits as $key => $val) {
    echo "fruits[" . $key . "] = " . $val. "<BR>";
}
?>
```

(i)   What is the significance of the delimiters <?php ?> in the
above code ?   *1*

(ii) Identify any one inbuilt array handling function from the
above code.   *1*

(iii) Name the type of one-dimensional PHP array used in the
above code.   *1*

(iv) Give the output of the above code.   *1*

(d) Study the code given below :

```php
<?php
$file = fopen("exam.txt",_____);
$count = 0;
while(!feof(_____)) {
   $c = _____($file);
$c = strtolower($c);
   if($c=='a' || $c=='e' || $c=='i' || $c=='o' || $c=='u')
     $count = $count + 1;
}
echo "Number of vowels :". $count . "<br>";
_____($file);
?>
```
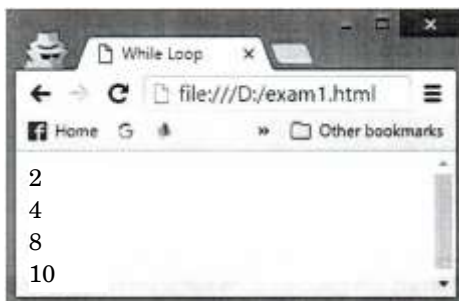
Fill in the blanks to complete the above code fragment that reads the
text in the file exam.txt character by character and counts the
number of vowels in the file.   *2*

6. Answer the following questions based on JavaScript :

(a) Study the code given below carefully and choose the correct output generated by this code from the given two output options : *1*

```
<SCRIPT LANGUAGE="JavaScript">
var num=0
do
{
    num=num+2
    if(num==6)
      continue
    document.write(num)
    document.write("<BR>")
}while(num<10)
</SCRIPT>
```
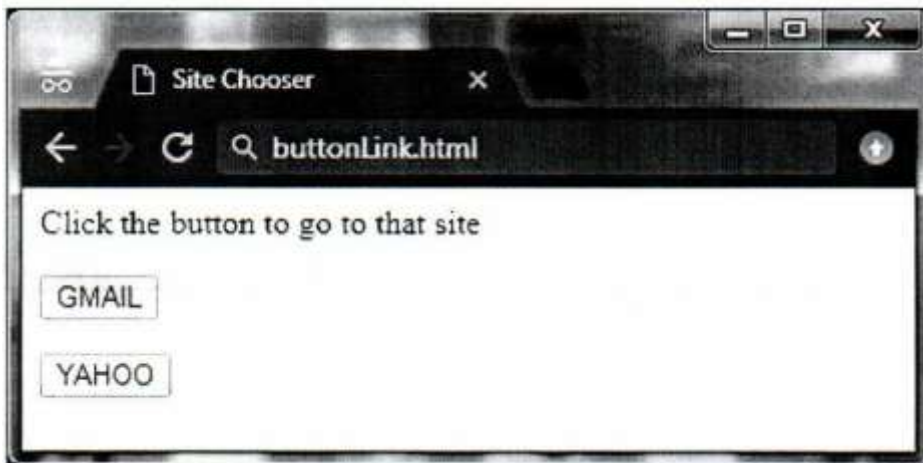
Output Option 1 :

Output Option 2 :

(b) Name the top level object or the default object of the JavaScript Object Model *1*
   (i)   Window
   (ii) Body
   (iii) Document
   (iv) Location

(c) Study the code given below and answer the questions that follow :

```
<HTML>
<HEAD>
<SCRIPT LANGUAGE="JavaScript">
     function start()
     {
       document.write("<H1> Course Name: MWT </H1>")
       document.write("Class : XII")
     }
</SCRIPT>
</HEAD>
<BODY onLoad= "start()">
     <CENTER> <H1> Welcome   to   the   start   function
     </H1></CENTER>
</BODY>
</HTML>
```

(i) How many times will the function start() be called ?   1

(ii) How will the output change if document.write() is replaced by document.writeln() in the first line of the function start() ?   1

(iii) Give the output of the above code.   2

(d) Write the HTML code to design the following web page with 2 buttons in a form and the embedded JavaScript code to open the corresponding web page on the click of the selected button :   4

Note : The desired href's for the two sites Gmail and Yahoo are https://www.gmail.com and https://login.yahoo.com respectively.

7. (a) Seema needs a network device that should regenerate the signal over the same network before the signal becomes too weak or corrupted. Amit needs a network device to connect two different networks together that work upon different networking models so that the two networks can communicate properly.

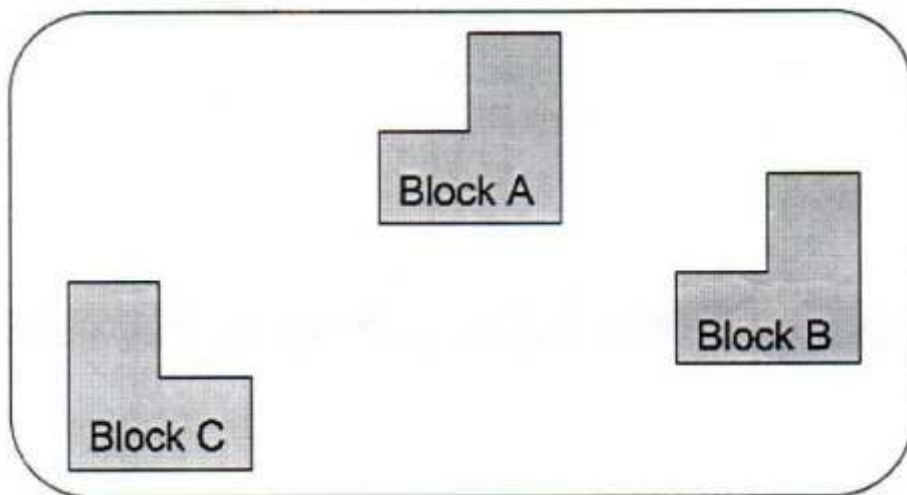Name the devices that should be used by Seema and Amit. *2*

(b) Which protocol helps us to transfer files to and from a remote computer ? Also give the expansion of the protocol. *2*

(c) Write two advantages of 4G over 3G Mobile Telecommunication Technologies in terms of speed and services. *2*

(d) EduLimitless Solutions is in the process of setting up their new campus in a remote area. As a network expert, you are expected to help the institution by studying the physical locations of various blocks and the number of computers to be installed. On the basis of the given information, provide the best possible answers for the queries (i) to (iv) to help them in the planning phase.

Block to Block distances (in mtrs.) :

Place From	Place To	Distance
Block A	Block B	30m
Block B	Block C	70m
Block C	Block A	50m

Expected number of computers in each block :

Block	No. of Computers
Block A	80
Block B	35
Block C	45

(i)   Name the block that is most suitable to house the server for this campus with a suitable reason.   *1*

(ii) Draw the most appropriate cable layout to connect all three blocks for efficient communication.   *1*

(iii) Name the topology formed in between the buildings by the above cable layout.   *1*

(iv) Which wireless channel out of the following should be chosen by the Company Management to connect to their campus in another country ?   *1*

  •   Radiowave

  •   Microwave

  •   Satellite