

Roll No.

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

- Please check that this question paper contains **8** 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 :**

- All questions are compulsory.*
- Answer the questions after carefully reading the text.*

- (a) Observe the table TRAINING of a Database named Training and Development given below carefully and answer the questions that follow :

**Table : TRAINING**

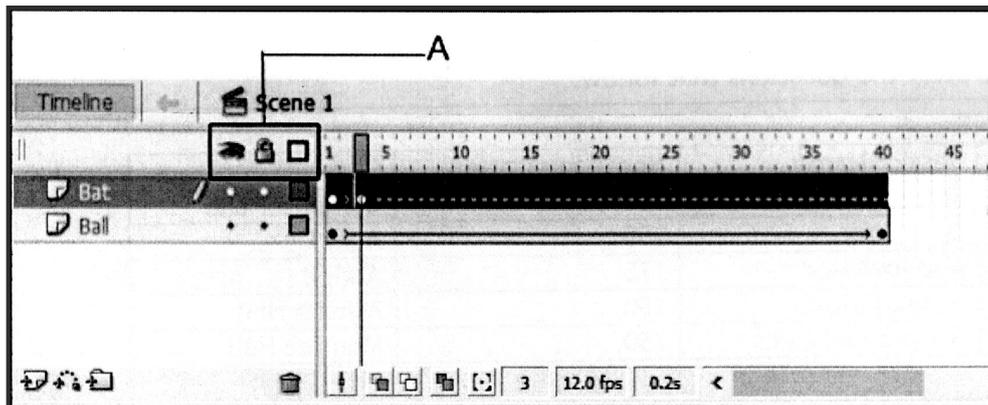
| SessionCode | SessionName         | NoofRegistrations | SessionVenue |
|-------------|---------------------|-------------------|--------------|
| 101         | Scratch Programming | 150               | Computer Lab |
| 102         | DJ Mixing           | 200               | Audi I       |
| 103         | App Inventor        | 175               | Audi II      |
| 104         | Image Editing       | 100               | Ashoka Hall  |
| 105         | Animation Basics    | 250               | Mumtaz Hall  |

- Keeping the above data in mind, suggest two different data types for the SessionCode and NoofRegistrations attributes (that are most suitable). **1**

- (ii) What is the degree and the cardinality of the table TRAINING ? 1
  - (iii) Which attribute can act as the Primary key for the table TRAINING ? 1
  - (iv) If a new attribute named SessionDate is added to the above table that will store the Date of the Session, then suggest the most appropriate data type that should be used for this new attribute. 1
- (b) Amanvir has created a symbol in Flash which can be clicked and used as an interactive object. Name the type of symbol he has created. 1
- (c) Sukhbeer is a trainer who wants to train his students for driving a car before actually making them sit in a real car. Which of the following multimedia technology will help him achieve this : 1
- (1) Video on Demand
  - (2) Virtual Reality
  - (3) Video Conferencing
- (d) Explain the concept of Foreign key with the help of an example. 2
- (e) Give the full forms of 2
- (1) PNG
  - (2) AVI

2. Answer the following questions based on Macromedia Flash :

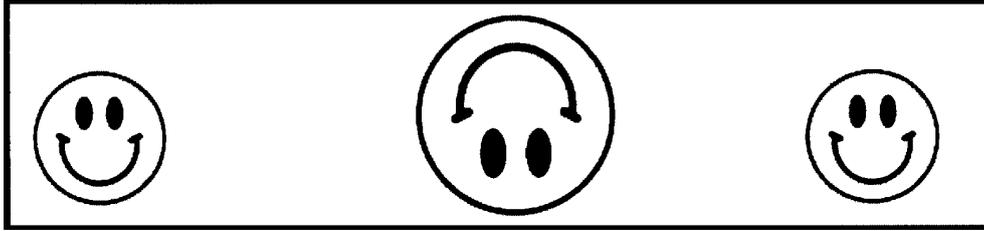
- (a) Which feature will you use to see faint images of the keyframes before and after the current frame ? 1
- (b) Name the two tags used to insert a Flash movie into a HTML file. 2
- (c) Observe the figure given below and answer the questions that follow :



- (i) Name the active layer. 1
- (ii) The area marked as A shows the 3 layer modes. Name these three modes and explain the usage of any one layer mode. 2

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

4



- 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 side shows the position and size for frame 50.
- The smiley graphic used in the animation is saved in the flash library.

Write the procedure and property settings for animating the above scenario. Assume that the colour remains the same during the animation.

3. Answer the following questions based on HTML :

(a) Rashim has recently learnt HTML and is designing a form to receive the details of the visitors who visit her company's website and wish to enroll for a free workshop on "The Art of Sketching". She has to take in the input for age and hobbies. She is confused which interface element, radio button or checkbox, should she use for these two inputs. Can you suggest her which element to use for these two inputs ? Justify your suggestion.

2

(b) Write the HTML code to generate the web page in the format shown :

8

**TYPES OF PLANTS**

Plants are one of five big kingdoms of living things. Plants include familiar types such as *trees, herbs, bushes, grasses, vines, ferns, mosses, and green algae*. Plants may be broadly put into 4 categories :

1. Trees : Tall, big and strong plants. For example -
  - o Peepal
  - o Palm
2. Shrubs : Smaller than trees, they may be bushy and have several wooden branches. For example -
  - o Hibiscus
  - o Lantana
3. Herbs: Small plants with soft stems. For example -
  - o Coriander
  - o Mint

But some plants can not be put in the above broad categories. A few examples are:

| NAME         | DESCRIPTION   | IMAGE |
|--------------|---|-------|
| Water Plants | These plants live in water. Eg Lotus  |       |
| Climbers     | Plants with weak stems that need support to rise above ground level. Eg Money plant |       |

To learn more about plants you may visit <http://www.allaboutplants.com>

Consider the following point while writing the code :

- (1) The background colour is “CF6” :
- (2) The Horizontal line is 5 pixels thick and Blue in colour.
- (3) The font used in the paragraph is ‘Comic Sans MS’, size : 5 and Green in colour.
- (4) The table has a blue coloured border which is 5 pixels thick and a distance of 5 pixels is maintained in-between cells.
- (5) The images shown in the table are “lotus.jpg” and “moneyplant.htm”.
- (6) A hyperlink should be provided for the website given at the bottom of the page.

4. Answer the following questions based on PHP : **1**
- (a) \$\_POST is an array of variables passed to the current script via the HTTP POST method. Which of the following statement is false about the POST method ?
- (1) In the POST method there is no restriction on data size to be sent.
  - (2) Form submissions with POST can be bookmarked.
  - (3) The POST method can be used to send ASCII as well as binary data.
  - (4) The data sent by POST method goes through HTTP header and is more secure.
- (b) Which variable is used to collect form data sent with both the GET and POST methods ? **1**
- (1) \$RESPONSE
  - (2) \$\_BOTH
  - (3) \$REQUEST
  - (4) \$\_REQUEST
- (c) Give the output of the following statements : **4**
- (1) echo 13% 7 + 3 \* 2 - 10;
  - (2) echo 15 > 8 AND ! 5 <= 3;
  - (3) echo 20 \* 3 / 10 + 4 \* \* 2;
  - (4) echo (5 - 3) \* (4 / 2 - 3);
- (d) Name the inbuilt function used for the following : **4**
- (1) Perform a case-insensitive string comparison
  - (2) Take a string as argument and return the string with all alphabetic characters converted to uppercase
  - (3) Return the Unix timestamp for a date
  - (4) Return the number of days in a month for a specified year and calendar

5. Answer the following questions based on PHP :

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

```
<?PHP
    $sum = 0;
    echo "The output is : <BR>";
    for($A=1;$A<=10;$A+=3)
    {   echo $A."<BR>";
        $sum += $A*$A;
    }
    echo ("The final sum is: ".$sum);
?>
```

(b) Differentiate between the unset( ) function and the session\_destroy( ) function. **2**

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

```
<?PHP
    $a = array(1, 3, 2, 6, 4, 8, 7, 10, 13, 15);
    $sum = 0;
    foreach($a as $num)
        if ($num%3 == 0)
            $sum += $num;
    echo "Sum = $sum";
    echo "<HR>";
?>
```

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

(ii) Name the two different types of one dimensional arrays in PHP. **1**

(iii) Identify any one compound assignment operator from the above code. **1**

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

(d) Study the code given below :

```
<?php
$file = fopen("exam.txt", "_____");
//Output one line until end-of-file
while (_____($file)) {
    echo _____ ($file) . "<br>";
}
_____ ($file);
?>
```

Fill in the blanks to complete the above code fragment that reads the text in the file exam.txt and displays the content line by line on the web page. **2**

6. Answer the following questions based on JavaScript :
- (a) When a user views a page containing a JavaScript program, which machine actually executes the script ? 1
- (A) The User's machine running a Web browser  
 (B) The Web Server  
 (C) A central machine deep within Google's corporate offices  
 (D) None of the above
- (b) Identify the statement that is equivalent to the given statement 1  
**document.write("Hello! Welcome to JavaScript World")**
- (A) location.document.write("Hello! Welcome to JavaScript World")  
 (B) alert("Hello! Welcome to JavaScript World")  
 (C) window.document.write("Hello! Welcome to JavaScript World")  
 (D) body.document.write("Hello! Welcome to JavaScript World")
- (c) Study the code given below and answer the questions that follow :
- ```
<HTML>
<TITLE>Playing with Data Types</TITLE>
<BODY>
<SCRIPT LANGUAGE="JavaScript">
var num1,num2
num1=parseInt(prompt("Enter the first number"))
num2=parseFloat(prompt("Enter the second number"))
document.write("<BR>The first number is: " + num1)
document.write("<BR>The second number is: " + num2)
document.write("<BR>The sum is: " + eval("num1+num2"))
document.write("<BR>The statement result is not a
number is: "+isNaN(eval("num1-num2")))
</SCRIPT>
</BODY>
</HTML>
```
- (i) What type of value will be stored in num1 and num2 ? 1
- (ii) Give the output of the above code if the values input by the user are 20.5 and 23.5. 3

(d) Write the HTML code to generate the following form :

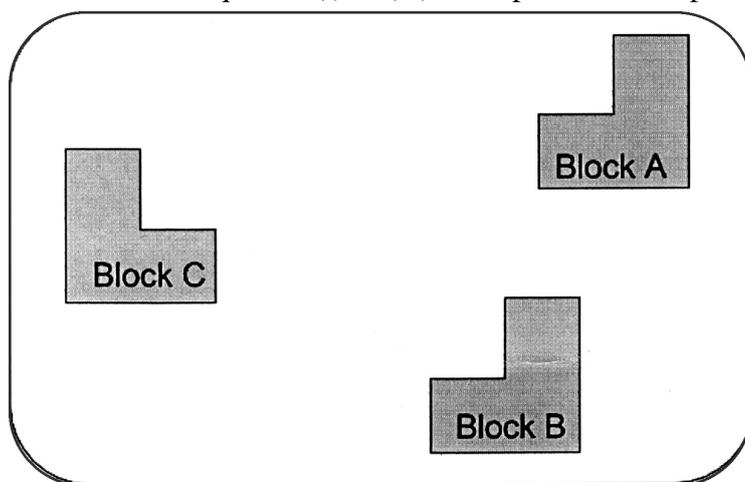
4

**Odd Number Checker**

**Enter the Number**

Write the JavaScript code to display the message “The number is even” if the number is even or “The number is odd” otherwise on the click of the **CHECK** button. The message should be displayed in an alert box.

7. (a) Two engineers have connected their mobile phones to transfer a picture of a building being designed by them 2
- (i) What type of network is formed ?
- (ii) Which communication media out of Coaxial cable, Optical fiber, Bluetooth, Satellite link should be used to transfer the file ?
- (b) Which protocol helps us to browse through web pages using internet browsers ? Name any one internet browser. 2
- (c) Write two advantages of 4G over 3G Mobile Telecommunication Technologies in terms of speed and services ? 2
- (d) Edu Limitless 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  | 50 m     |
| Block B    | Block C  | 80 m     |
| Block C    | Block A  | 40 m     |

Expected number of computers in each block :

| Block   | No. of Computers |
|---------|------------------|
| Block A | 80               |
| Block B | 30               |
| Block C | 40               |

- (i) Draw the most appropriate cable layout to connect all three blocks for efficient communication. **1**
  - (ii) Name the topology formed by the above cable layout. **1**
  - (iii) Name the block that is most suitable to house the server for this campus with a suitable reason. **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
-