SET-4

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 in the answer-book 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 TOPICS and TRAINERS of a Database named TrainingDetails given below carefully and answer the questions that follow :

Table : TOPICS

TopicID	TopicName	TopicSessions	TopicCost
T01	Artificial Intelligence Overview	10	10000
T11	AI in Education	5	5000
T02	Basic Machine Learning	15	12000
T13	Advanced Machine Learning	20	15000
T03	Basics of Deep Learning	10	10000

Table : TRAINERS

TrainerCode	TrainerName	TrainerSkill
TR005	Suchita Majumdar	AI
TR012	Annie Daniel	MLBasic
TR002	Saminder Kaur	AI
TR012	Annie Daniel	MLAdvanced
TR002	Saminder Kaur	AIEdu
TR005	Suchita Majumdar	AIEdu
TR002	Saminder Kaur	DLBasic

(i) Write SQL command to display all the records in the table TRAINERS. *1*

(ii) What is the degree and cardinality of the table TOPICS ? *2*

      (iii)   Which attribute can act as the primary key for the table TRAINERS ? *1*

      (iv)   If a new attribute named TopicStartDate is added to the table TOPICS that will store the StartDate of the Topic, then suggest the most appropriate data type that should be used for this new attribute. *1*

(b)   Ranjukta is trying to create a Flash movie. She had added 2 layers to the movie. She is able to see the content placed on layer1 on the stage but the content placed on layer2 is not visible. What should she do so that she can see the content of layer2 ? *1*

(c)   Which multimedia component has extension as .GIF ? *1*

(d)   Mention any one usage of Multimedia in Education. *1*

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

      (i)   PNG

      (ii)   DAT

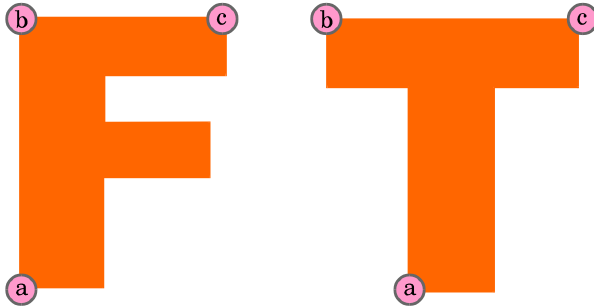**2.**   Answer the following questions based on Macromedia Flash :

(a)   Which feature will you use to see faint images of the keyframes before and after the current frame ? *1*

(b)   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

(c) Explain the term morphing with the help of a suitable example. *2*

(d) Shamlaya is creating an animation to convert alphabet F to alphabet T. She has used a feature to control the tween as demonstrated in the following figure. Identify and name this feature. Also name the type of tween created. *2*

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

- The graphic on the left hand side shows the position of text for frame 1.

- The graphic on the right hand side shows the position and size for frame 50.

- Assume that the colour remains the same during the animation.

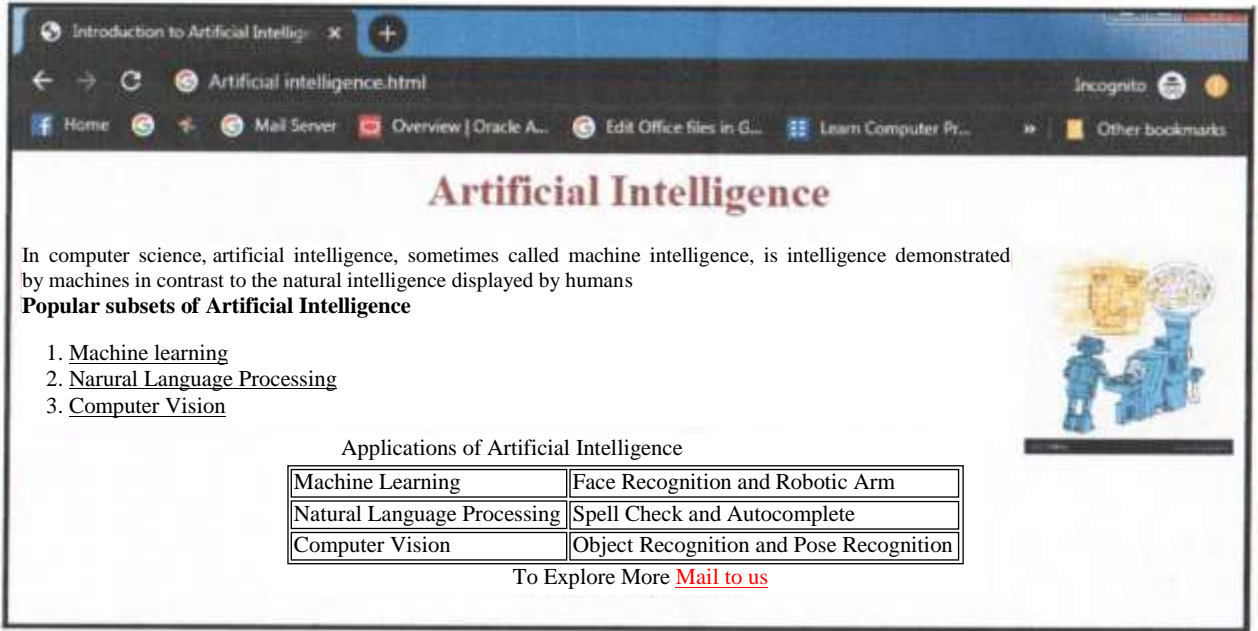- Assume the figure is stored in the Flash library as Cone.jpg.

Write the procedure and property settings for animating the above scenario. *4*

3. Answer the following questions based on HTML :

(a) What is the utility of the <HTML> and the <BODY> tags in an HTML code ? *2*

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

Consider the following points while writing the code :

(i) Title of the page should be "Introduction to Artificial Intelligence".

(ii) The main Heading of the page is "Brown".

(iii) Picture used in the page is the file "AI.jpg".

(iv) Text in paragraph is red.

(v) Table should have a border of width 1, border of the table should be "green".

(vi) The table should have the caption as Applications of Artificial Intelligence

(vii) Pages linked to :

     a.   Machine Learning as "mac.html".

     b.   Natural Language Processing as "nlp.html".

     c.   Computer Vision as "com.html".

(viii) Bottom message is of size 2 and is mail linked to contact@abc.com.

4. Answer the following questions based on PHP :

(a) What are the two major advantages of using $_POST instead of $_GET ? *2*

(b) How is an Echo different from the Print statement ? *2*

(c) Swayam wrote the following code to loop through the items in the $colors array and display them. Identify the errors in the following code and rewrite the corrected code : *2*

```
$colors = new array ("red", "green", "blue", "yellow");
forevery ($colors == x)
{
    echo $x;
}
```

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

```
(i)   echo(10*2*4-6*6);

(ii) echo(strcmp("Global", "global"));

(iii)echo "Today is" . date("F j Y");

(iv) echo "Hello" . ltrim(("###Donald Duck"));
```

       Note: # denotes a blank space

5. Answer the following questions based on PHP :

(a) Explain Query String with an example. *2*

(b) Name any two text file open modes. *2*

(c) Write a function that accepts two strings as arguments and compares their lengths. The function should return 1 if the lengths are equal, otherwise the function should return 0. *3*

(d) Following is the code to create a connection to the server and to create database name Library in mySql. Fill in the blanks to complete the code. *3*

```php
<?php

    $servername = "localhost";

    $username = "root";

    $pwd = "SimSim";

    $conn = _____( _____,$username, $pwd);

    If( _____)

        die("Could not connect".mysqli_error($conn));

    $sql = "_____ Library";

    If (_____(($conn, _____ ))

        echo "Database created successfully";

    else

        echo "database not created".mysqli_error($conn);

    mysqli_close($conn);

?>
```

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6. Answer the following questions based on JavaScript :

(a) Underline the errors and rewrite the corrected code :   *2*

```
<SCRIPT TYPE="Javascript">
   FUNCTION TOTAL( )
   {   FOR J = 2 TILL 10 JUMP 2
          TOTAL = TOTAL + J
          MESSAGE ("the total is:"& TOTAL)
   }
   CALL TOTAL
</SCRIPT>
```

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

```
<HTML>
<TITLE>Playing with Data Types</TITLE>
<BODY>
<SCRIPT LANGUAGE="JavaScript">
     x=2,y=10;
     function Change (a,b)
     {
         sum=0;
         for(xl=b; xl<=y; xl+=3)
         {     sum+=a+x;
               a-=x;
               document.write(a + "<br>");
         }
         document.write(sum);
     }
     P=4
     Q=8
     Change(Q,P)
</SCRIPT>
</BODY>
</HTML>
```

(i) Give the output of the above code.   *2*

(ii) Change the while loop to for loop without affecting the output.   *2*

(c)   Write the HTML code to generate the following form :   *4*

Write the JavaScript code to display the amount earned, on the click of the CHECK button, in a message box calculated as

- **600 * NoOfDays** for Females

- **450 * NoOfDays** for Males

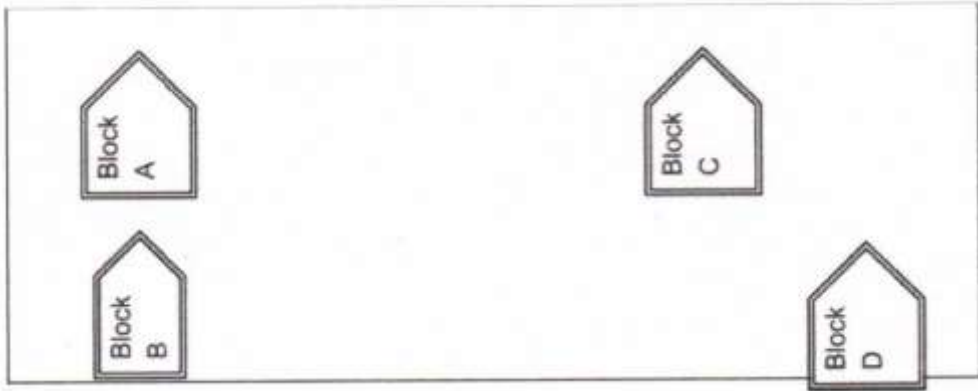**7.**   (a)   Name one Open-Source RDBMS and Operating System each.   *2*

(b)   Soma has entered a computer network without having authorized access to check the security of her office. On the other hand, Promila has entered a computer network without having authorized access with the intent of stealing documents. Who among them will be called a hacker and who will be known as a cracker ? Also mention who among them is doing an ethical job.   *2*

(c)   Name the protocol to be used in the following situations :   *2*

(i)   For transmitting files on the World Wide Web

(ii)   For sending and receiving e-mails

(d) EduMantra 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	150 m
Block C	Block D	25 m
Block A	Block D	170 m
Block B	Block D	125 m
Block A	Block C	90 m

Expected number of computers in each block :

Block	No. of Computers
Block A	25
Block B	35
Block C	45
Block D	75

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

(ii)   What type of network out of the following is formed by connecting the computers of these buildings ?   *1*

      A.   LAN

      B.   MAN

      C.   WAN

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

(iv)   The organization is planning to provide a high speed link with its head office situated in Kolkata using a wired connection. Which cable will be most suitable for this job ?   *1*