

Northern India Engineering College
MULTIMEDIA

1. a) What is the difference between the Number and Auto Number data types of Access? 1

Number	Auto Number
1. The Number data type can be used for storing various kinds of numbers such as integers, decimals etc.	1. The Auto Number data type is used for storing only integer numbers.
2. These values are input by the user	2. These values are automatically generated when a record is added.
3. They need not be in sequence	3. The Auto Number data type is used for unique sequential (incrementing by 1) numbers

(1 mark for any one correct differentiation point)
(½ mark if only 1 option is correct)

b) Name the following: 1
 i) The extension of an Access database file.
 ii) The view in which we can add, edit and view records in MS-Access.

Answer i) .MDB
 ii) Datasheet View
(½ mark for each option)

c) What is the full form of PNG? 1

Answer PNG stands for Portable Network Graphics.
(1 mark for correct full form)
(½ mark if only two of the characters are correctly expanded)

d) Study the following data and answer the questions given below:

Table: Book

Book_Title	Acc_no	Author	Price
ASP	1002	Russell	325.00
VBScript	1014	Simon	295.00
HTML	1001	Ray	350.00
Jscript	1020	Jaworski	375.00

Table: Issue

Member_no	Issue_Date	Return_Date	Acc_No
1432	07/12/2003	07/22/2003	1001
2042	09/30/2003	10/10/2003	1020
1245	10/08/2003	10/18/2003	1002
1432	10/03/2003	10/13/2003	1014
1324	09/30/2003	10/03/2003	1001

i) What type of relationship exists between table Book and table Issue? 1

Answer A many to many relationship exists between table Book and table Issue
(1 mark for naming the correct relationship type)

ii) Name the fields, which can act as the primary key and foreign key for the table **Book** and the table **Issue** respectively. 2

Answer The field Acc_No can be set as the primary key for the table Book.
The field Acc_No can be set as foreign key for the table Issue.
(1 mark each for correctly naming the primary key and foreign key)

e) Differentiate between the .FLA and .SWF file formats of a Flash movie. 1

Answer

.FLA format	.SWF format
1. Flash movies in the authoring environment have the FLA extension	1. A movie exported as a Flash Player movie has the SWF extension.
2. A .FLA movie file can only be viewed using the Flash software	2. The .SWF file can be viewed even without the Flash software as it contains a self-contained Flash Player included within the movie itself.
3. The .FLA file can be edited	3. The .SWF file cannot be edited

(1 mark for any one correct difference between the two)

f) Shrinivas wants to provide links to his favourite songs on his website. He wishes to listen to all songs before giving a link to them. Which of the following hardware is essentially required by him? 1

a) Graphics Card
b) MIDI Interface Card
c) Sound Card
d) Network Interface Card

Answer The hardware required is sound card.
(1 mark for naming the correct hardware)

g) Mr. Raja Maheshwari is planning to gift a digital album to his daughter on her birthday. All the images have lots of colour shading and are all static images. Which of the following formats are best suited for this purpose: 2

(i) GIF
(ii) JPEG
(iii) AVI
Justify your choice

Answer Mr. Raja Maheshwari should save the images in JPEG format because it supports lots of colours (suitable for shading), and JPEG real life static photographs are more compressed than GIF.
(1 mark for naming the correct format)
(1 mark for the correct justification)

2. Answer the following questions based on Macromedia Flash:

- a) What is the full form of fps? What will happen if the Frame rate is decreased from 12 to 5 fps? 1

Answer The full form of fps is frames per second. if the frames per second is decreased from 12 to 5 we will not be able to view the animation properly
(½ mark for the correct expansion and ½ mark for explaining the correct effect)

- b) Write the difference between a guide layer and a mask layer. 2

Answer A motion guide layer lets the designer draw paths along which tweened symbols can be animated whereas a mask layer is used to create a hole through which the contents of one or more underlying layers are visible.
(2 marks for the correct differentiation)
(1 mark if only one is correctly explained)

- c) Differentiate between a Symbol and an Instance. 2

Answer

Symbol	Instance
1. Symbols are reusable media elements such as graphics, buttons, movie clips etc. that can be used in a movie.	1. Instance is an occurrence of a symbol
2. The symbol is stored in the file's library	2. An instance is placed on the Stage
3. A change in any of the symbols effect all its instances	3. A change in an individual instance need not effect the symbol.

(1 mark each for any two correct differences)

- d) What is the difference between hiding a layer and locking a layer? 1

Answer Hiding a layer means that the contents of that layer are not visible and locking a layer means that the contents of that layer cannot be edited.
(1 mark for the correct difference)
(½ mark if only one option is correct)

- e) Consider the figure given below and do as directed: 4



- The circle on the left hand side shows the position and size of the image for frame 1.

- The colour of the image is red.
- The circle on the right hand side shows the position and size of the image for frame 20. The colour of the image is yellow.
- The circle on frame 1 moves and transforms into a semicircle on frame 20.

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

Answer The following steps have to be followed to animate the given scenario:

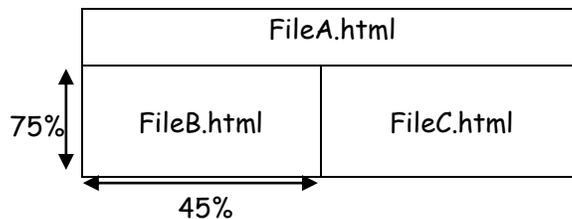
- Select frame 1 from the timeline and select Insert → New Symbol → Graphic
- Create the red coloured figure given on the left hand side.
- Insert an instance of this symbol in frame 1 by dragging it from the library window.
- Select frame 20 from the timeline and Select Insert → Keyframe
- Change the size and shape of the image using scaling button
- Change the colour of the object by selecting Tint option from the Effect palette and selecting the new colour.
- Select any frame between 1 and 20
- Select Create shape tween.

(½ mark for each correct step)

3. Answer the following questions based on HTML:

a) Write the HTML code to create a framed web page in the following format:

2



Answer The required coding is :

```
<HTML>
<FRAMESET ROWS = "25%,*">
  <FRAME SRC = "FileA.HTML">
  <FRAMESET COLS = "45%,*">
    <FRAME SRC = "FileB.html">
    <FRAME SRC = "FileC.HTML">
  </FRAMESET>
</FRAMESET>
</HTML>
```

(½ mark for each correct <FRAMESET> tag)

(½ mark each for any two correct <FRAME> tags)

b) Write the HTML code to generate a Web Page in the format given below :

8

Consider the following while writing the HTML code

1. Title of the page should be "Tourism Industry"
2. Background colour of the page should be "Silver", Link colour should be "Maroon", visited link colour should be "Red" .
3. Picture used in the page is the file "beach.jpg"
4. Table should have a border of width 2.
5. Use the concept of nested lists for creating the list given in the web page with specified bullets.
6. Pages linked to :
 - Front Office as "front.html"
 - Food & Beverages as "food.html"

Hospitality Industry

One of the industries which is on the path of rapid growth is the hospitality industry.



Hotels are broadly classified as:

Hotels	Resorts
Business Hotels	Beach resorts
Luxury Hotels	Hill resorts
Budget Hotels	Heritage resorts

Departments in a Hotel

1. **Front Office**
 - o Reservations
 - o Reception
 - o Guest Relations
2. **Food and Beverages**
 - Room Service
 - Coffee Shop
 - Restaurant

For all further enquires :[Contact us](#)

Answer <HTML>

```

<HEAD><TITLE> Tourism Industry </TITLE></HEAD>
<BODY BGCOLOR="silver" LINK="maroon" VLINK="red">
<H2 ALIGN=center>Hospitality Industry </H2>
<HR SIZE=3 COLOR=black><BR>
<IMG SRC="beach.jpg" HEIGHT=150 WIDTH=200 ALIGN="right">
<P><B>One of the industries which is on the path of rapid growth
is the hospitality industry.
<P>Hotels are broadly classified as:<BR>
<TABLE WIDTH=300 HEIGHT=150 ALIGN=center BORDER=2>
<TR><TH>Hotels</TH><TH>Resorts</TH>
<TR><TD>Business Hotels</TD><TD>Beach resorts</TD></TR>
<TR><TD>Leisure Hotels</TD><TD>Hill resorts</TD></TR>
<TR><TD>Budget Hotels</TD><TD>Heritage resorts</TD></TR>
</TABLE>
<B><FONT SIZE=4 COLOR=maroon>Departments in a Hotel</FONT></B>
<OL><LI><A HREF="front.html">Front Office</A>
<UL TYPE=circle><LI>Reservations
<LI>Reception
<LI>Guest Relations
</UL><BR>
<LI><A HREF="food.html">Food and Beverages</A>
<UL TYPE=square>
<LI>Room Service
<LI>Coffee Shop
<LI>Restaurant
</UL><BR>
</OL>
<HR SIZE=3 COLOR=black>
<FONT SIZE=2><P ALIGN=center>For all further enquires :<A
HREF="mailto:tourist@abc.com">Contact us</A></P>

```

- (1 mark for correct use of <HTML> and <BODY> tags)**
- (1 mark for displaying heading correctly and <HR> tag)**
- (1 mark for correct use of tag)**
- (1 mark for correct use of <P> and/or
 tags to display text given on left side of image)**
- (1½ mark for correct use of and tags in proper nested order)**
- (1 mark for correct use of <A> tag for creating links)**
- (1 mark making table correctly)**
- (½ mark for correct display of bottom message)**

4. Answer the following questions based on ASP:

- a) Name any two technologies which are equivalent to ASP. 1

Answer Two technologies which are equivalent to ASP are JSP and PHP.
(½ mark for naming each correct equivalent technology)

- b) Study the code snippet given below: 2
 <SCRIPT LANGUAGE="VBScript">

```
OPTION EXPLICIT
A=10
B=20
DOCUMENT.WRITE (A+B)
</SCRIPT>
```

Whenever the above code is executed it displays an error. There are two ways to avoid this error. Modify this script so as to avoid the error and write the corrected code for both the ways.

Answer Option Explicit requires the variable to be declared .If this statement is written and variable is used without declaration, then the interpreter will generate an error. Two ways to resolve an error are :

The first way is :

```
<SCRIPT LANGAUGE="VBSCRIPT">
OPTION EXPLICIT
DIM A=10
DIM B=20
DOCUMENT.WRITE(A+B)
</SCRIPT>
```

The second way is :

```
<SCRIPT LANGAUGE="VBSCRIPT">
A=10
B=20
DOCUMENT.WRITE(A+B)
</SCRIPT>
```

(1 mark each for writing the corrected script for each of the two methods)

c) Explain with an example the difference between the string operators + and &. 2

Answer The string concatenation operator(&) is used to merge two strings together to form a new string.

The + operator can also be used for string concatenation. It can handle strings, but when strings are mixed with numbers, it may give ambiguous results.

Example:

```
A="12"
B=8
N="Hello"
C=A&B          ' C will contain 128
D=A+B          ' D will contain 20
E=N&B          ' E will contain Hello8
F=N+B          ' this will give type mismatch error
```

(1mark for correct differentiation and 1 mark for example)

(Full 2 marks if the difference is explained only with the help of an example)

d) Use the following script to answer the questions that follow:

2

```
<!-- - Start the script - - >
<%
    DIM A
    A = 10
    StartSub
    Sub StartSub
        Work
        B = 20
        Work
    END SUB
    SUB Work
        A=A+5
    END SUB
%>
```

i) How many subroutines are used in the above code snippet? Name them.

Answer Two subroutines have been used namely StartSub and Work
(½ mark for each correct subroutine name)

ii) What is the value of A and B before the subroutine StartSub ends?

Answer Just before the subroutine StartSub ends, values of both the variables are:
A = 20
B = 20
(½ mark for each correct value)

e) Give output of the following statements:

3

- i) Response.Write(UCASE(MID("Hello There"),7,3))
- ii) Response.Write(MONTHNAME(MONTH("15-2-2003")))
- iii) Response.Write((4+5)MOD(3^2))

Answer i) THE
ii) February
iii) 0
(1 mark for each correct output)

5. Answer the following questions based on ASP:

a) What is the purpose of using the Global.asa file?

1

Answer The purpose of the special file Global.asa file is to contain information that's global to the application. Each application in ASP has a Global.asa file which is located in the application's root directory.

(1 mark for correct purpose)

b) Differentiate between the RESPONSE object and REQUEST object .

2

Answer The Response object of ASP contains all the information about the response sent from the web server to a web browser whereas the Request object contains all the information about the HTTP request sent from the web browser to the web server.
(1 mark for the correct differentiation)

c) Rewrite the following code after removing errors with each correction underlined. 2

```
<HTML>
<HEAD>
<%
    sub vbproc(num1,num2)
        request.write(num1*num2)
    %>
</HEAD>
<BODY>
<p>
Result: <%call vbproc(3)%>
</p>
<%vbproc 3,4>
</p>
</body>
</html>
```

Answer Corrected script with errors underlined:

```
<HTML>
<HEAD>
<%
    sub vbproc(num1,num2)
        Response.Write(num1*num2)
    end sub
    %>
</HEAD>
<BODY>
<p> Result: <%call vbproc(3,5)%> </p>
<%vbproc 3,4 %>
</p>
</body>
</html>
```

(½ mark for correcting each error)

(1½ mark if all the errors have been identified but the corrected script is not written)

d) Give the output for the following code segment: 2

```
<html>
<body>
<%
sometext = "Bye!"
max=Len(sometext)
For i=0 to max
```

```

newtext=Left (sometext, i)
response.write (strReverse (newtext) )
response.write ("<br>")
next
%>

```

Answer Output:

```

B
yB
eyB
leyB  (½ mark for each line)

```

e)

3

- To display the current time and the name of the company on the opening page as displayed
- To display a greeting message “GOOD MORNING” if the user accesses the website between 5 and 12 A.M. and “GOOD EVENING” otherwise.

The current date and time is: 1/25/2010 5:20:47 PM

GOOD EVENING

Answer

```

<HTML>
<BODY>
<H1><CENTER>SHLOKA International</CENTER></H1>
The current date and time is: <%response.write(now())%>.
<BR>
<%IF HOUR (TIME ())>5 HOUR (TIME ())<12 THEN
    RESPONSE.WRITE ("GOOD MORNING")
ELSE
    RESPONSE.WRITE ("GOOD EVENING")
END IF %>
</BODY>
</HTML>

```

- (½ mark for correct usage of server side delimiter)*
- (½ mark for displaying the correct date and time using now())*
- (½ mark for displaying the name of the company using <H1>)*
- (1 mark for correct usage of IF statement)*
- (½ mark for correct display of message according to time)*

6. Answer the following questions based on VBScript:

- a) Observe the code segment given below and answer the questions that follow:

2

```
<SCRIPT LANGUAGE= "VBScript">
DIM A,B,C
A = 10 ^ 3 MOD 4\2
B = 40 MOD 3
IF NOT(B >= A) THEN
  C = 5
ELSE
  C = 10
END IF
</SCRIPT>
```

- a) Name any one relational operator and one logical operator used in the above code segment
b) Rewrite the statement : IF NOT(B >= A) THEN without using the NOT operator

Answer a) The relational operator is >= and the logical operator is NOT
b) IF(B<=A)

**(½ mark each for naming one relational and one logical operator)
(1 mark for the correct IF statement)**

- b) Name the built-in functions to be used in the following situations:
(i) To return a number rounded to specified decimal places.
(ii) To check if string1 occurs within string2 and return the starting position of string2 in string1.

1

Answer i) ROUND()
ii) INSTR()
(½ mark for each correct function name)

- c) Write the equivalent script for the following code using FOR loop without effecting the output:

2

```
<SCRIPT LANGUAGE="VBScript">
DIM count,ans
ans=1
count=2
DO
  ans=ans*count
  count=count+2
LOOP WHILE count<=10
document.write(ans)
</SCRIPT>
```

Answer <SCRIPT LANGUAGE="VBScript">
DIM count,ans
ans=1

```
FOR count=2 TO 10 STEP 2
  ans=ans*count
NEXT
document.write(ans)
</SCRIPT>
```

(1 mark for correct syntax of FOR statement)
(½ mark for giving correct value in STEP)
(½ mark for NEXT)

- d) Give the output of the following code segment:

1

```
<SCRIPT LANGUAGE="VBScript">
Dim Names()
Dim Count
Count = 2
ReDim Names(Count)
Names(0)="Raj"
Names(1)="Simran"
Names(2)="Nisha"
ReDim Names(Count + 2)
Names(3)="Maya"
Names(4)="Rohit"
Document.Write(Names(0))
Document.Write(Names(1))
Document.Write(Names(2))
Document.Write(Names(3))
Document.Write(Names(4))
</SCRIPT>
```

Answer The output is :

MayaRohit

(½ mark for each correct name)

- e) Create a form that contains two checkbox options and a textbox as shown below. When the user clicks on any checkbox the selected options must be displayed in the textbox. Write the HTML code for creating the form and the embedded VBScript code for the click events of the checkboxes.

4

The Check Box Control - Click on a check box.

Please select the categories that interest you.

Movies

Books

You have selected: books

```

Answer <HTML>
<HEAD>
<SCRIPT LANGUAGE="VBScript">
Sub ShowResults()
  Dim Result
  Result = "You have selected:  "
  If chkmovie.Checked Then
    Result = Result & " movies  "
  End If
  If chkbook.Checked Then
    Result = Result & " books  "
  End If
  txtResult.Value = Result
End Sub
</SCRIPT>
</HEAD>
<BODY>
<H4>The Check Box Control - Click on a check box.</H4>
<P>Please select the categories that interest you.<BR>
<INPUT TYPE="checkbox" NAME="chkmovie" OnCLICK="ShowResults">
Movies<BR>
<INPUT TYPE="checkbox" NAME="chkbook" OnCLICK="ShowResults">
Books<BR>
<P>
<INPUT NAME="txtResult" SIZE="60">
</BODY>
</HTML>

```

(1 mark for correct declaration and end of sub routine)

(1 mark for correct if statements)

(½ mark for correct use of <FORM> tag)

(1 mark for correctly making checkboxes)

(½ mark for correct usage of onClick event)

7. Answer the following questions based on Communication and network concepts:

- a) Girish Ramanuj is an entrepreneur who has recently set up a new business. Girish needs to create a lot of documents, presentations, databases and spreadsheets to

maintain data and spread his business. However, he does not have the money to purchase any of the proprietary software which offers all these packages. Can you suggest what software can Girish use for which he has to pay no licensing fee?

Answer Girish Ramanuj can use Free open source software to save on licensing fee.
(1 mark for correct software)

b) Why is optical fibre cable preferred over twisted pair cable and coaxial cable? 2

Answer A twisted pair consists of two insulated copper wires, each with its own plastic insulation, twisted together in a helical form whereas the Coaxial cable is an electrical cable consisting of a single round conducting wire, surrounded by an insulating spacer, surrounded by a cylindrical conducting sheath, and usually surrounded by a final insulating layer.

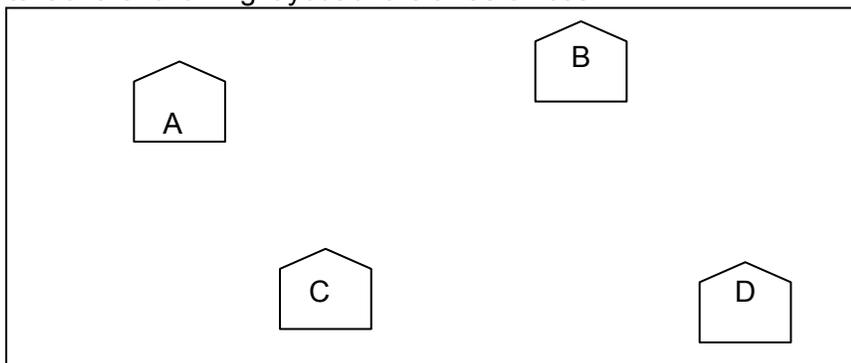
(2 marks for the correct difference)
(1 mark if only one option is correct)

c) Explain the following terms: 3
i. Shareware
ii. GSM
iii. TCP/IP

Answer
i. **Shareware:** A method of marketing software where a program is distributed freely, and users may try it before paying for it.
ii. **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.
iii. **TCP/IP:** Transmission Control Protocol/Internet Protocol. A group of protocols that specify how computers communicate over the Internet.

(1 mark for each correct definition)

d) An Organization has its offices in building A, B, C and D. Answer questions (a) to (d) in context of the following layout of the three offices: 4



Centre to Centre distances between different buildings are as follows:

| | |
|--------------------|-------|
| Block A to Block B | 100 m |
|--------------------|-------|

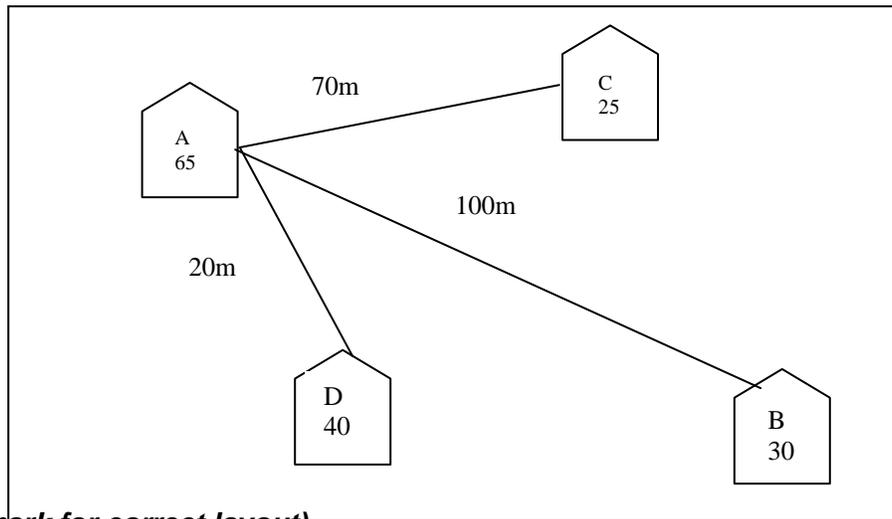
| | |
|--------------------|-------|
| Block A to Block C | 70 m |
| Block A to Block D | 20 m |
| Block B to Block C | 150 m |
| Block B to Block D | 120 m |
| Block C to Block D | 140 m |

Each of the above buildings has following number of computers

| | |
|---|----|
| A | 65 |
| B | 30 |
| C | 25 |
| D | 40 |

- (i) Suggest and draw the layout for a network, with proper justification to connect all the office

Answer Layout is:



(1 mark for correct layout)

- (ii) Where would the following preferably be placed
- Bridge
 - Repeater

Answer

- A bridge needs to be placed at each of the buildings where the wires from the nodes concentrate, since it is needed to interconnect two segments of a LAN, which uses the same protocol.
- A repeater needs to be placed along the wire between buildings A and B & also between A and C.

(½ mark for suggesting the correct placement of each)

- (iii) Suggest the most suitable place to house the server for the organization with proper justification.

Answer Building A can house the server, since it contains the maximum number of computers.
(½ mark for naming the correct block)
(½ mark for correct justification)

- (iv) If the organization needs to link up to a branch office which is in a neighbouring city, (around 100 km distant) suggest the best type of cabling connection, from the building hosting the server, provided price is not a factor.

Answer Since price is not a factor, Optical Fibre is best suited and shall give best speed.
(1 mark for naming the correct cable type)