

COMPUTER SCIENCE

(330)

Time : 3 Hours]

[Maximum Marks : 60

- Note :**
- (i) This question paper consists of **39** questions in all.
 - (ii) All questions are compulsory.
 - (iii) Marks are given against each question.
 - (iv) **Section A consists of :**
 - (a) **Q. No. 01 to 12** Multiple Choice type questions (MCQs) carrying **01** mark each. Select and write the most appropriate option out of the four options given in each of these questions.
 - (b) **Q. No. 13 to 24** carry **01** mark each and **Q. No. 25 to 27** - Objective type questions of **02** marks each.
 - (v) **Section B consists of :**
 - (a) **Q. No. 28 to 35** – Very Short questions carrying **02** marks each to be answered in the range of **30** to **50** words.
 - (b) **Q. No. 36 and 37** – Short Answer type questions carrying **03** marks each to be answered in the range of **50** to **80** words.
 - (c) **Q. No. 38 and 39** – Long Answer type questions carrying **04** marks each to be answered in the range of **80** to **120** words.

NOTE :

- (1) Answers of all questions are to be given in the Answer-Book given to you.
 - (2) 15 minutes time has been allotted to read this question paper. The question paper will be distributed at 02.15 p.m. From 02.15 p.m. to 02.30 p.m., the students will read the question paper only and will not write any answer on the answer-book during this period.
-

SECTION - A

- 1 In HTML, which of the following is the default value of TYPE attribute of tag? **1**
(A) Circle (B) Square
(C) Disc (D) Star
- 2 Which of the following is the shortcut key to exit Writer? **1**
(A) Ctrl+E (B) Ctrl+X
(C) Ctrl+T (D) Ctrl+Q
- 3 In HTML, which of the following tag is used to insert a blank line on a web page? **1**
(A) <HR> (B)

(C) <BLANK LINE> (D) <LINE>
- 4 Which of the following statements will position the file read pointer named FPointer in the beginning of the file. **1**
(A) FPointer.seekg (0, ios :: beg)
(B) FPointer.seekg (ios :: beg, 0)
(C) seekg.Fpointer (0, ios :: beg)
(D) seekg.Fpointer (ios :: beg, 0)
- 5 In HTML, which of the following is NOT an attribute of tag? **1**
(A) FACE (B) SIZE
(C) COLOR (D) TEXT
- 6 Statement 1 : There is no difference between <P> and
 tags. **1**
Statement 2 : A tag can have more than one attributes.
(A) Statement 1 is correct but Statement 2 is incorrect.
(B) Statement 2 is correct but Statement 1 is incorrect.
(C) Both Statement 1 and Statement 2 are correct.
(D) Both Statement 1 and Statement 2 are incorrect.

- 7 Ajit has created an integer array in C++ named `myArray` of size 10. The statement `cout<<myArray [5];` will display : 1
- (A) The sixth element of the array, `myArray`.
 (B) The fifth element of the array, `myArray`.
 (C) All elements of the array, `myArray`.
 (D) Will result in an error.
- 8 Which of the following causes a direct effect of ICT on environment? 1
- (A) Disposal of e waste (B) Weak eyesight
 (C) Unemployment (D) Social Media Addiction
- 9 Which of the following attribute of `` tag is used to specify the location and file name of the image to be inserted on the web page? 1
- (A) `FILENAME` (B) `SOURCE`
 (C) `SRC` (D) `LOCATION`
- 10 What will be the output of the following expression if `num1=1`, `num2=5` and `num3=2` : 1
- `num1 * num3 <= num2 && num2 == num3 * 5`
- (A) 0 (B) 1
 (C) Error (D) 2
- 11 In OpenOffice Writer, the vertical blinking line in the work area is known as _____. 1
- (A) Ruler (B) Animation
 (C) Scroll Bar (D) Cursor
- 12 Which of the following is the correct statement to create an integer pointer named `myAge`? 1
- (A) `int myAge*;` (B) `int myAge[*];`
 (C) `int *myAge;` (D) `*int myAge;`

13 Expand HTTPS. 1

14 Convert $(109)_{10}$ to hexadecimal. 1

15 Assume the following structure definition : 1

```
struct EXAM
{
    int marks;
    char grade;
};
```

If E is the pointer instance of the given structure, write a C++ statement to display the value of marks using E.

16 Convert $(89)_{10}$ to binary. 1

17 Write any two container elements. 1

18 Name the other header files that shall be required for successful compilation of the following C++ program. 1

```
#include<iostream.h>
void main()
{
    char Message [] = "Meeting at 9";
    length = strlen (message);
    if (length > 10)
        cout<<Message;
    else
        cout<< sqrt(length);
}
```

- 19 Draw NOR gate and write its logical equation. 1
- 20 Define microblogging. 1
- 21 Write a C++ statement to display the size in bytes of a float variable weight. 1
- 22 Write the output of the following code. Assume all the required header files are already included. 1

```
void main( )
{
    int p=1, q;
    q=10;
    do
    {
        p=p*5;
        q=q+p;
        cout<<p--<<"**"<<q<<endl;
    }while(p<10);
}
```

- 23 Write the following code using switch..case statement. Do not change the logic. 1

```
if(x=='a')
    cout<<"APPLE";
else if (x=='b')
    cout<<"BERRY";
else
    cout<<"FRUITY FRUITS";
```

24 Consider the following statement : 1

```
enum METALS{Iron, Copper=25, silver, Gold, Platinum}
```

What will be the value of Silver?

25 What is the use of Rehearse Timing Feature in OpenOffice Impress? 2

Which option is selected to use this feature?

26 Give any two advantages of Object Oriented Programming. 2

27 Roohi has created the following spreadsheet in OpenOffice Calc, to store 2

data of students. She wants to view data for a particular course. Which

feature should she use? Also write steps to view data on for the course

– **JEE Mains.**

	A	B	C	D	E
1					
2	Sr No	Student_Id	Name	Course	
3	1	J002	Ashrit	JEE Mains	
4	2	N091	Smita	NEET UG	
5	3	C001	Guneet	CUET	
6	4	J112	Rajju	JEE Adv	
7	5	J165	Murugan	JEE Mains	
8	6	N872	Om	NEET PG	
9	7	C231	Shanti	CUET	
10					

SECTION - B

28 Give any two advantages of grid computing. **2**

OR

Give one difference between IaaS and PaaS, Also give one example of each.

29 Differentiate between DDL and DML. **2**

OR

What is the difference between logical and physical record? Give example to support your answer.

30 Observe the table – VOLUNTEERS given below and write the queries (i) and (ii) that follow : **2**

Table: VOLUNTEERS

R_ID	Name	DOB	City	OCCUPATION
102	Joyce	14/09/2000	Noida	Service
110	Rekha	19/10/2001	Gurugram	Business
114	Amit	24/05/1999	Delhi	Farming
120	Irfaan	4/4/2002	Mumbai	Actor
121	Sonu	01/12/2002	Mumbai	Service

(i) To add a new field Income (of datatype integer) in the table VOLUNTEERS.

(ii) To display the names of each city only once.

31 What do you understand by following components of Mail Merge feature in a word processor? **2**

(a) Data Source

(b) Merged Document

32 Which tag is used to format headings on a web page? How many levels of headings can we have? **2**

33 Consider the following class definition :

2

```
class MEMBERS
{
    int M_Id;
    char Name[30];
    int Age;
    char Category[10];
public:
    MEMBERS()
    {
        M_Id=1234;
        strcpy (Name, "Member");
        Age=0;
        strcpy(Category, "Permanent");
    }
    void EnterData()
    {
        cin>>M_Id>>Age;
        gets (Name);
        if (Age>=40)
            strcpy(Category, "Permanent");
        else
            strcpy(Category, "Temporary");
    }
    void DisplayData()
    {
        cout<<M_Id<<Name<<Age<<Category;
    }
};
```

_____ # Statement 1

_____ # Statement 2

Complete the above code by filling in the missing statements:

Statement 1: To create an object of class MEMBERS

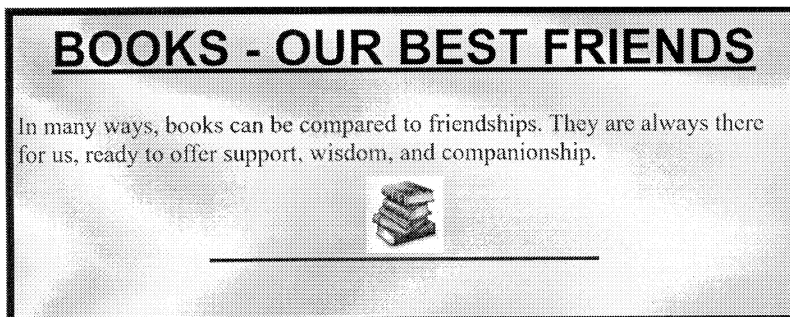
Statement 2: To invoke the EnterData() through the object created in Statement 1.

- 34 What is the use of following devices in a network? 2
(a) Modem
(b) Gateway

OR

Define the following :

- (a) Spam
(b) Firewall
- 35 What is the difference between = and == operators. Give example in support of your answer. 2
- 36 Design the following web page with the specifications given below : 3



- (i) The background colour of the page is pink and the text colour is blue.
(ii) The heading has the font style as "Arial", colour as black and size as 14. It should be underlined and in the centre of the page.
(iii) The font size of the paragraph is 10.
(iv) The name of the image file is **mybook.jpg**. The length and breadth of the image is 150 pixels.
(v) The solid line in the centre is of 6 pixels, is of red colour and covers 80% of the page.
- 37 Define the following : (any **three**) 3
(i) DBMS
(ii) Redundancy of data
(iii) Database Schema
(iv) Primary Key
(v) Degree

38 Consider the following class definition and answer the questions that follow : 4

```
class software
{
    char Name[20];
    char type[10];
protected:
    int cost;
public:
    software();
    ~software();
    void ENTER();
    void DISPLAY();
};
class Developer: protected Software
{
    char name[30];
protected:
    char country[10];
public:
    developer();
    ~developer();
    void Indata();
    void Outdata();
};
class Sale: public Software
{
    float sale_amount;
public:
    sale();
    ~sale();
    void Show();
};
```

- (i) Which type of inheritance is depicted in the given code?
- (ii) Name the data member(s) that can accessed from function Indata().
- (iii) Name the member function(s) which can be accessed from the objects of class sale.
- (iv) What is the size in bytes of class Developer?

OR

Explain abstract classes and virtual base classes. Support your answer with suitable examples.

- 39** Write a function that takes an array and its size as argument and displays the largest and smallest element in the array. Accept 10 numbers to form the array and call the function to display the largest and smallest element. **4**

OR

Write a user defined function, named Latest_Brands() to read the data of the binary file 'brands.dat' and display only those records whose rating is more than 7. The data file, brands.dat stores the objects of following class :

```
class BRAND_DATA
{
    int B_id;
    char name[10];
public:
    float rating;
    void enterdata()
    {
        cin>>B_id;
        gets(name);
        cin>>rating;
    }
    void showdata()
    {cout<<B_id<<name<<rating;
    }
};
```

This Question Paper consists of **39** questions and **12** printed pages.

Roll No.

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Code No. **70/OSS/2**

SET –

B

COMPUTER SCIENCE
(330)

Day and Date of Examination _____

Signature of Invigilators 1. _____

2. _____

General Instructions :

1. Candidate must write his/her Roll Number on the first page of the Question Paper.
2. Please check the Question Paper to verify that the total pages and total number of questions contained in the Question Paper are the same as those printed on the top of the first page. Also check to see that the questions are in sequential order.
3. Making any identification mark in the Answer-Book or writing Roll Number anywhere other than the specified places will lead to disqualification of the candidate.
4. Write your Question Paper Code No. **70/OSS/2, Set-

B

COMPUTER SCIENCE

(330)

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SECTION - A

- 1 Which of the following is the shortcut key to exit Writer? **1**
(A) Ctrl+E (B) Ctrl+X
(C) Ctrl+T (D) Ctrl+Q
- 2 In HTML, which of the following CANNOT be a value of TYPE attribute of tag? **1**
(A) A (B) i
(C) DISC (D) a
- 3 In HTML, which of the following tag is used to insert a solid black line on a web page? **1**
(A) <HR> (B)

(C) <BLANK LINE> (D) <LINE>
- 4 Which of the following statements will position the file read pointer named FPointer in the beginning of the file. **1**
(A) FPointer.seekg (0, ios :: beg)
(B) FPointer.seekg (ios :: beg, 0)
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- 5 Ajit has created an integer array in C++ named myArray of size 10. **1**
The statement `cout<<myArray [5];` will display :
(A) The sixth element of the array, myArray.
(B) The fifth element of the array, myArray.
(C) All elements of the array, myArray.
(D) Will result in an error.
- 6 In HTML, which of the following is NOT an attribute of tag? **1**
(A) FACE (B) SIZE
(C) COLOR (D) TEXT

- 7 Statement 1 : A tag is a special word enclosed in angular brackets that conveys some message to the browser. 1
Statement 2 : A tag can have more than one attributes.
(A) Statement 1 is correct but Statement 2 is incorrect.
(B) Statement 2 is correct but Statement 1 is incorrect.
(C) Both Statement 1 and Statement 2 are correct.
(D) Both Statement 1 and Statement 2 are incorrect.
- 8 Which of the following causes a direct effect of ICT on environment? 1
(A) Disposal of e waste (B) Weak eyesight
(C) Unemployment (D) Social Media Addiction
- 9 Consider an integer pointer named `myAge`. Which of the following statement holds the address of an integer variable `num`? 1
(A) `myAge* = #` (B) `myAge = #`
(C) `num = &myAge;` (D) `myAge = *num;`
- 10 What will be the output of the following expression if `num1=10`, `num2=100` and `num3=5` : 1
`num1 * num3 <= num2 && num2 == num3 * 20`
(A) 0 (B) 1
(C) Error (D) 2
- 11 Which of the following attribute of `` tag is used to specify the location and file name of the image to be inserted on the web page? 1
(A) FILENAME (B) SOURCE
(C) SRC (D) LOCATION
- 12 In OpenOffice Writer, the vertical blinking line in the work area is known as _____. 1
(A) Ruler (B) Animation
(C) Scroll Bar (D) Cursor

13 Convert $(A1)_{16}$ to decimal. **1**

14 Expand PPP. **1**

15 Assume the following structure definition : **1**

```
struct EXAM
{
    int marks;
    char grade;
};
```

If E is the pointer instance of the given structure, write a C++ statement to display the value of marks using E.

16 Convert $(89)_{10}$ to binary. **1**

17 Write the following code using switch..case statement. Do not change the logic. **1**

```
if(x=='a')
    cout<<"APPLE";
else if (x=='b')
    cout<<"BERRY";
else
    cout<<"FRUITY FRUITS";
```

18 Name the header files that shall be required for successful compilation of the following C++ program. **1**

```
void main()
{
    char ch;
    ch = getchar();
    cout<<ch;
}
```

19 Draw NOR gate and write its logical equation. **1**

20 Define microblogging. **1**

21 Write a C++ statement to display the size in bytes of a float variable `weight`. **1**

22 Write the output of the following code. Assume all the required header files are already included. **1**

```
void main( )
{
    int p=6;
    int q=1;
    do
    {
        p=p*q;
        cout<<p++<<"**"<<q<<endl;
        q = q-1;
    }while(p<7);
}
```

23 Consider the following statement : **1**

```
enum METALS{Iron, Copper=25, silver, Gold, Platinum}
```

What will be the value of Silver?

24 Write any two empty elements. **1**

25 What is the use of Rehearse Timing Feature in OpenOffice Impress? 2
Which option is selected to use this feature?

26 Roohi has created the following spreadsheet in OpenOffice Calc, to store data of students. She wants to view data with names in alphabetical order. Write steps to perform the task. 2

	A	B	C	D	E
1					
2	Sr No	Student_Id	Name	Course	
3	1	J002	Ashrit	JEE Mains	
4	2	N091	Smita	NEET UG	
5	3	C001	Guneet	CUET	
6	4	J112	Rajju	JEE Adv	
7	5	J165	Murugan	JEE Mains	
8	6	N872	Om	NEET PG	
9	7	C231	Shanti	CUET	
10					

27 Give any two advantages of Object Oriented Programming. 2

SECTION - B

28 What do you understand by following components of Mail Merge feature in a word processor? 2

- (a) Data Source
- (b) Merged Document

29 Differentiate between DDL and DML. 2

OR

What is the difference between logical and physical record? Give example to support your answer.

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110	Rekha	19/10/2001	Gurugram	Business
114	Amit	24/05/1999	Delhi	Farming
120	Irfaan	4/4/2002	Mumbai	Actor
121	Sonu	01/12/2002	Mumbai	Service

(i) To add a new field Income (of datatype integer) in the table VOLUNTEERS.

(ii) To display the names of each city only once.

33 Differentiate between <P> and
 elements. 2

34 Consider the following class definition : 2

```
class MEMBERS
{
    int M_Id;
    char Name[30];
    int Age;
    char Category[10];
public:
    MEMBERS()
    {
        M_Id=1234;
        strcpy (Name, "Member");
        Age=0;
        strcpy(Category, "Permanent");
    }
    void EnterData()
    {
        cin>>M_Id>>Age;
        gets(Name);
        if (Age>=40)
            strcpy(Category, "Permanent");
        else
            strcpy(Category, "Temporary");
    }
    void DisplayData()
    {
        cout<<M_Id<<Name<<Age<<Category;
    }
};
```

_____ # Statement 1

_____ # Statement 2

Complete the above code by filling in the missing statements:

Statement 1: To create an object of class MEMBERS

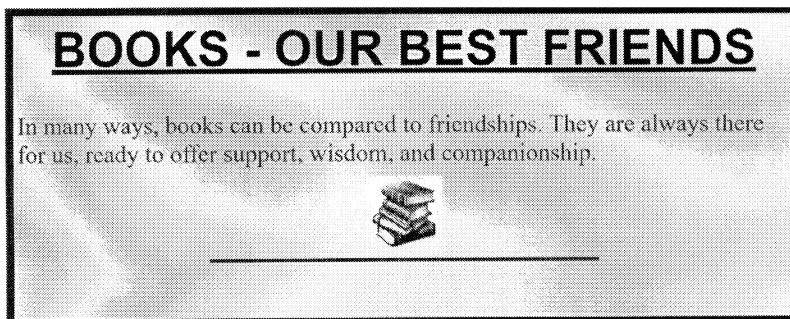
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- 37 Define the following : (any **three**) 3
- (i) DBMS
 - (ii) Redundancy of data
 - (iii) Database Schema
 - (iv) Primary Key
 - (v) Degree

38 Consider the following class definition and answer the questions that follow : 4

```
class software
{
    char Name[20];
    char type[10];
protected:
    int cost;
public:
    software();
    ~software();
    void ENTER();
    void DISPLAY();
};
class Developer: protected Software
{
    char name[30];
protected:
    char country[10];
public:
    developer();
    ~developer();
    void Indata();
    void Outdata();
};
class Sale: public Software
{
    float sale_amount;
public:
    sale();
    ~sale();
    void Show();
};
```

- (i) Which type of inheritance is depicted in the given code?
- (ii) Name the data member(s) that can be accessed from function Indata().
- (iii) Name the member function(s) which can be accessed from the objects of class sale.
- (iv) What is the size in bytes of class Developer?

OR

Explain abstract classes and virtual base classes. Support your answer with suitable examples.

- 39 Write a function that takes an array and its size as argument and displays the largest and smallest element in the array. Accept 10 numbers to form the array and call the function to display the largest and smallest element. 4

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Write a user defined function, named Latest_Brands() to read the data of the binary file 'brands.dat' and display only those records whose rating is more than 7. The data file, brands.dat stores the objects of following class :

```
class BRAND_DATA
{
    int B_id;
    char name[10];
public:
    float rating;
    void enterdata()
    {
        cin>>B_id;
        gets(name);
        cin>>rating;
    }
    void showdata()
    {cout<<B_id<<name<<rating;
    }
};
```

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Roll No.

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Code No. **70/OSS/2**

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COMPUTER SCIENCE
(330)

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SECTION - A

- 1** Ajit has created an integer array in C++ named `myArray`. **1**
The statement `cout<<*(myArray + 5)` will display :
(A) The sixth element of the array, `myArray`.
(B) The fifth element of the array, `myArray`.
(C) All elements of the array, `myArray`.
(D) Will result in an error.
- 2** In HTML, which of the following is the default value of `TYPE` attribute of `` tag? **1**
(A) Circle (B) Square
(C) Disc (D) Star
- 3** Which of the following is the shortcut key to open the Find and Replace dialog box? **1**
(A) `Ctrl+F` (B) `Ctrl+R`
(C) `Ctrl+R+F` (D) `Ctrl+Q`
- 4** Which of the following is the correct statement to create an integer pointer named `myAge`? **1**
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Statement 2 : A tag can have more than one attributes.
(A) Statement 1 is correct but Statement 2 is incorrect.
(B) Statement 2 is correct but Statement 1 is incorrect.
(C) Both Statement 1 and Statement 2 are correct.
(D) Both Statement 1 and Statement 2 are incorrect.
- 8 In HTML, which of the following tag is used to insert a blank line on a web page? 1
(A) <HR> (B)

(C) <BLANK LINE> (D) <LINE>
- 9 Which of the following causes a direct effect of ICT on environment? 1
(A) Disposal of e waste (B) Weak eyesight
(C) Unemployment (D) Social Media Addiction
- 10 What will be the output of the following expression if num1=3, num2=20 and num3=1 : 1
num1 * num3 <= num2 && num2 == num3 * 5
(A) 0 (B) 1
(C) Error (D) 2
- 11 In OpenOffice Writer, the vertical blinking line in the work area is known as _____. 1
(A) Ruler (B) Animation
(C) Scroll Bar (D) Cursor
- 12 Which of the following statements will position the file write pointer named FPointer in the beginning of the file. 1
(A) FPointer.seekp (0, ios :: beg)
(B) FPointer.seekp (ios :: beg, 0)
(C) seekp.Fpointer (0, ios :: beg)
(D) seekp.Fpointer (ios :: beg, 0)

- 13** Assume the following structure definition : **1**
- ```
struct HOLIDAY
{
 int H_id;
 char destination[20];
};
```
- If H is the pointer instance of the given structure, write a C++ statement to display the value of destination using H.
- 14** Expand FTP. **1**
- 15** Convert  $(109)_{10}$  to hexadecimal. **1**
- 16** Write any two container elements. **1**
- 17** Convert  $(11010)_2$  to decimal. **1**
- 18** Consider the following statement : **1**
- ```
enum METALS{Iron, Copper=15, Silver, Gold, Platinum}
```
- What will be the value of Gold?
- 19** Name the other header files that shall be required for successful compilation of the following C++ program. **1**
- ```
#include<iostream.h>
void main()
{
 char Message [] = "Meeting at 9";
 length = strlen (message);
 if (length > 10)
 cout<<Message;
 else
 cout<< sqrt(length);
}
```

- 20** Write the output of the following code. Assume all the required header files are already included. **1**

```
void main()
{
 int p=1, q;
 q=10;
 do
 {
 p=p*5;
 q=q+p;
 cout<<p--<<"**"<<q<<endl;
 }while (p<10);
}
```

- 21** Define Video Conferencing. **1**

- 22** Write a C++ statement to display the size in bytes of a float variable weight. **1**

- 23** Write the following code using switch..case statement. Do not change the logic. **1**

```
if (x=='a')
 cout<<"APPLE";
else if (x=='b')
 cout<<"BERRY";
else
 cout<<"FRUITY FRUITS";
```

- 24 Draw NAND gate and write its logical equation. 1
- 25 What is the use of Rehearse Timing Feature in OpenOffice Impress? 2  
Which option is selected to use this feature?
- 26 Roohi has created the following spreadsheet in OpenOffice Calc, to store 2  
data of students. She wants to view data for a particular course. Which  
feature should she use? Also write steps to view data on for the course  
– **JEE Mains**.

|    | A     | B          | C       | D         | E |
|----|-------|------------|---------|-----------|---|
| 1  |       |            |         |           |   |
| 2  | Sr No | Student_Id | Name    | Course    |   |
| 3  | 1     | J002       | Ashrit  | JEE Mains |   |
| 4  | 2     | N091       | Smita   | NEET UG   |   |
| 5  | 3     | C001       | Guneet  | CUET      |   |
| 6  | 4     | J112       | Rajju   | JEE Adv   |   |
| 7  | 5     | J165       | Murugan | JEE Mains |   |
| 8  | 6     | N872       | Om      | NEET PG   |   |
| 9  | 7     | C231       | Shanti  | CUET      |   |
| 10 |       |            |         |           |   |

- 27 In Object Oriented programming, what do you mean by Data Encapsulation? 2  
Support your answer with suitable example.

**SECTION - B**

- 28** Give any two advantages of grid computing. **2**

**OR**

Give one difference between IaaS and PaaS, Also give one example of each.

- 29** Observe the table – VOLUNTEERS given below and write the queries (i) and (ii) that follow : **2**

Table: VOLUNTEERS

| <b>R_ID</b> | <b>Name</b> | <b>DOB</b> | <b>City</b> | <b>OCCUPATION</b> |
|-------------|-------------|------------|-------------|-------------------|
| 102         | Joyce       | 14/09/2000 | Noida       | Service           |
| 110         | Rekha       | 19/10/2001 | Gurugram    | Business          |
| 114         | Amit        | 24/05/1999 | Delhi       | Farming           |
| 120         | Irfaan      | 4/4/2002   | Mumbai      | Actor             |
| 121         | Sonu        | 01/12/2002 | Mumbai      | Service           |

- (i) To change the occupation of Sonu to Business.  
(ii) To display records of all volunteers in alphabetical order.
- 30** Differentiate between DDL and DML. **2**

**OR**

What is the difference between logical and physical record? Give example to support your answer.

- 31** Which tag is used to format headings on a web page? How many levels of headings can we have? **2**
- 32** What do you understand by following components of Mail Merge feature in a word processor? **2**
- (a) Data Source  
(b) Merged Document

**33** What is the difference between logical and relational operators. **2**  
Give example in support of your answer.

**34** Consider the following class definition : **2**

```
class MEMBERS
{
 int M_Id;
 char Name[30];
 int Age;
 char Category[10];
public:
 MEMBERS()
 {
 M_Id=1234;
 strcpy (Name, "Member");
 Age=0;
 strcpy(Category, "Permanent");
 }
 void EnterData()
 {
 cin>>M_Id>>Age;
 gets(Name);
 if (Age>=40)
 strcpy(Category, "Permanent");
 else
 strcpy(Category, "Temporary");
 }
 void DisplayData()
 {
 cout<<M_Id<<Name<<Age<<Category;
 }
};
```

\_\_\_\_\_ # Statement 1

\_\_\_\_\_ # Statement 2

Complete the above code by filling in the missing statements:

Statement 1: To create an object of class MEMBERS

Statement 2: To invoke the EnterData() through the object created in

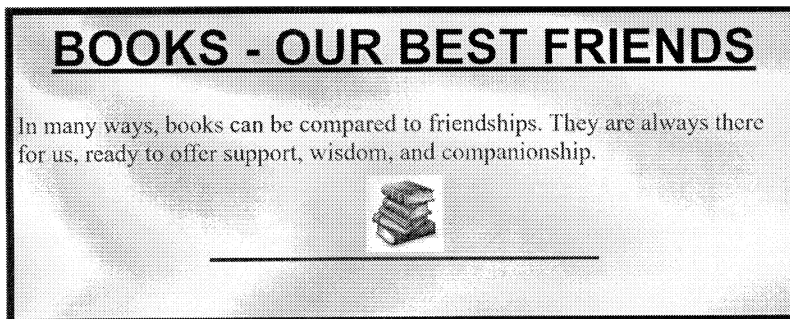
Statement 1.

- 35 What is the use of following devices in a network? 2
- (a) Modem
  - (b) Gateway

**OR**

Define the following :

- (a) Spam
  - (b) Firewall
- 36 Design the following web page with the specifications given below : 3



- (i) The background colour of the page is pink and the text colour is blue.
  - (ii) The heading has the font style as "Arial", colour as black and size as 14. It should be underlined and in the centre of the page.
  - (iii) The font size of the paragraph is 10.
  - (iv) The name of the image file is **mybook.jpg**. The length and breadth of the image is 150 pixels.
  - (v) The solid line in the centre is of 6 pixels, is of red colour and covers 80% of the page.
- 37 Define the following : (any **three**) 3
- (i) DBMS
  - (ii) Redundancy of data
  - (iii) Database Schema
  - (iv) Primary Key
  - (v) Degree

38 Consider the following class definition and answer the questions that follow : 4

```
class software
{
 char Name[20];
 char type[10];
protected:
 int cost;
public:
 software();
 ~software();
 void ENTER();
 void DISPLAY();
};

class Developer: protected Software
{
 char name[30];
protected:
 char country[10];
public:
 developer();
 ~developer();
 void Indata();
 void Outdata();
};

class Sale: public Software
{
 float sale_amount;
public:
 sale();
 ~sale();
 void Show();
};
```

- (i) Which type of inheritance is depicted in the given code?
- (ii) Name the data member(s) that can accessed from function Indata().
- (iii) Name the member function(s) which can be accessed from the objects of class sale.
- (iv) What is the size in bytes of class Developer?

**OR**

Explain abstract classes and virtual base classes. Support your answer with suitable examples.

- 39 Write a function that takes an array and its size as argument and displays the largest and smallest element in the array. Accept 10 numbers to form the array and call the function to display the largest and smallest element. 4

**OR**

Write a user defined function, named Latest\_Brands() to read the data of the binary file 'brands.dat' and display only those records whose rating is more than 7. The data file, brands.dat stores the objects of following class :

```
class BRAND_DATA
{
 int B_id;
 char name[10];
public:
 float rating;
 void enterdata()
 {
 cin>>B_id;
 gets(name);
 cin>>rating;
 }
 void showdata()
 {cout<<B_id<<name<<rating;
 }
};
```

---