This Question Paper consists of **31** questions and **8** printed pages.

Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐

COMPUTER SCIENCE
(330)

Day and Date of Examination _____

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4   Write your Question Paper Code No. **65/ASS/3, Set-A** on the Answer-Book.

COMPUTER SCIENCE

(330)

Time : **3** Hours]   [Maximum Marks : **60**

Note :   (i)   Answer **all** questions.

(ii)   Marks allotted to each question are given on the right-hand side.

(iii)   Use C++ programming language to answer the programming questions.

---

1   Name the header files to which the following built in functions belong :   **1**
(i)   fabs(x)
(ii)   islower(c)

2   What is the range that the integer data type supports?   **1**

3   Can reserved words of C++ be used as Identifier?   **1**

4   What do you mean by storage virtualization?   **1**

5   What do you mean by public cloud?   **1**

6   Explain container tag with an example.   **2**

7   Write any two features of OOP.   **2**

8   Explain nested if statement in C++ with its syntax.   **2**

9   Write a program to create an array of N elements, accept a number and   **4**
location from the user, delete the accepted number from the array and print
the new array.

10 Predict the output of the following program :   **2**

```
int main() {int x=2;
    switch(x) {
    case 5 : cout<<"Five"; break;
    case 1 : cout<<"One"; break;
    case 2 : cout<<"Two"; break;
    default : cout<<"No output"; break;
    }
}
```

11 Find the output of the following code. Assume that all required header files   **3**
are attached.

```
struct x {int a, b;};
struct y {x c; int d:};
void main(){
x d={5,10};
y f={ {2, 3}, 10};
    y g;
    g=f;
    g.c.a + = 2;
cout<<g.c.a<< " "
    <<g.c.b<< " "
    <<g.d;
}
```

12 Find the output produced by the following program segment. Assume all   **2**
header functions are imported.

```
Void main( )
{
int a=14;
int *b=&a;
cout<<a<<" "<<*b<<endl;
a++;
cout<<a<<" "<<*b<<endl;
}
```

13 Write SQL commands for the below given questions based on the below given EMP table. **3**

EmpNo	EMPNAME	GENDER	DEPT	DATE_OF_JOIN	SALARY
E001A	PANKAJ	M	SALES	2019-06-01	26000.00
E002A	ANJU	F	MARKETING	2019-08-01	20000.00
E003A	SAHIL	M	HR	2020-01-15	32000.00
E004A	HARSHITHA	F	FINANCE	2020-09-14	30500.00
E005A	RAHUL	M	SALES	2021-07-13	17500.00
E006A	VEENA	F	FINANCE	2022-04-01	18600.00

(i) Display the details of the employee belonging to MARKETING dept.

(ii) Change the salary of Pankaj to 30000.

(iii) Delete the record of the employee number E004A.

14 Identify how many times the loop gets executed : **2**

```
int n=10;
while (n>=5)
{
    n--;
}
```

15 Explain Data and Data Processing. **2**

16 Define a class EXAM in C++ with the following specifications : **4**

Private Members :

EXAMID integer
EXAM_SUB 20 character
DURATION float
E_TYPE 20 character

Public functions:

A constructor to initialise DURATION as 180 and
E_TYPE as "theory"
accept( ) to accept the full data
display( ) to display the full data

17 Consider the following class definition and answer the questions that follow : **3**

```
Class Teacher
{
char tno[10], tname[20], qual[15];
int days;
void assign();
protected:
float rem;

public :
Teacher();
void TEntry();
void Tdisplay();
};
class student
{
Char regno[10], sname[20], course[20];
protected :
int attd, grd;
public:
student();
void ent();
void dsp();
};

Class school : public student, public teacher
{
char sno [12];
char sname[20];
public :
school();
void s_entry();
void s_detail();
};
```

(i) What type of inheritance is used in the above example?

(ii) Write the names of all the members accessible from member functions of the class school.

(iii) If class school has derived privately from both student and teacher, then name the member functions that could be accessed by the objects of the class school.

18 Write a C++ program to write the odd numbers from 1 to 100 in a data file NUM.TXT. **3**

19 Define attribute in a relation. **1**

20 Write the html tag to display an image known as "nios.jpg" having a height of 40 pixels in your webpage. **2**

21 What will the below given html program produce? **3**

```
<html>
<body>
    <ul type=DISC>
        <li>Control Structures</li>
        <li>Introduction to C++</li>
        <li>Basic Concepts</li>
        <li>Pointers</li>
    </ul>

    <ol type='i'>
        <li>DBMS</li>
        <li>HTML</li>
        <li>Emerging Trends</li>
        <li>Web Design</li>

    </ol>
</body>
</html>
```

22 Write the html tag to draw a red colour line on the center of the web page.   **3**

23 What do you mean by size of operator in C++? Support with an example.   **2**

24 What will be the values of the variables 'n', 's' and 'i' after the following code is executed?   **3**

```
int n=2, s=0, i=6
for(n=12; n<=20; n++)
{
    if(n% 3 !=0)
    s=s+i;
}
cout<<n<< '' <<s<< "" <<i;
```

25 What is the use of break statement in C++?   **1**

26 What do you mean by actual parameters?   **1**

27 What is the use of the parameter ios :: in?   **1**

28 What is the use of tellg( ) pointer?   **1**

29 Define alternate key. **1**

30 Name the text editor that can be used for writing html program. **1**

31 What is the use of typedef statement. **1**

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4   Write your Question Paper Code No. **65/ASS/3, Set-**[B] on the Answer-Book.

COMPUTER SCIENCE

(330)

Time : **3** Hours]   [Maximum Marks : **60**

Note :   (i)   Answer **all** questions.

          (ii)   Marks allotted to each question are given on the right-hand side.

          (iii)   Use C++ programming language to answer the programming questions.

---

1   What is the use of typedef statement.   **1**

2   What is the use of tellg( ) pointer?   **1**

3   What is the use of the parameter ios :: in?   **1**

4   Write any two application areas of mobile computing.   **1**

5   What do you mean by grid computing?   **1**

6   Write the html tag to display an image known as "nios.jpg" having a height   **2**
     of 40 pixels in your webpage.

7   Write any two benefits of OOP.   **2**

8   Find the output produced by the following program segment. Assume all   **2**
header functions are imported.

```
Void main( )
{
int a=14;
int *b=&a;
cout<<a<<" "<<*b<<endl;
a++;
cout<<a<<" "<<*b<<endl;
}
```

9   Define a class EXAM in C++ with the following specifications :   **4**

Private Members :

EXAMID integer
EXAM_SUB 20 character
DURATION float
E_TYPE 20 character

Public functions:

A constructor to initialise DURATION as 180 and
E_TYPE as "theory"
accept( ) to accept the full data
display( ) to display the full data

10   Identify how many times the loop gets executed :   **2**

```
int n=10;
while (n>=5)
{
    n--;
}
```

11 What will be the values of the variables 'n', 's' and 'i' after the following code is executed? **3**

```
int n=2, s=0, i=6
for(n=12; n<=20; n++)
{
    if(n% 3 !=0)
    s=s+i;
}
cout<<n<< '' <<s<< "" <<i;
```

12 Explain container tag with an example. **2**

13 Write SQL commands for the below given questions based on the below given EMP table. **3**

EmpNo	EMPNAME	GENDER	DEPT	DATE_OF_JOIN	SALARY
E001A	PANKAJ	M	SALES	2019-06-01	26000.00
E002A	ANJU	F	MARKETING	2019-08-01	20000.00
E003A	SAHIL	M	HR	2020-01-15	32000.00
E004A	HARSHITHA	F	FINANCE	2020-09-14	30500.00
E005A	RAHUL	M	SALES	2021-07-13	17500.00
E006A	VEENA	F	FINANCE	2022-04-01	18600.00

(i) Display the details of the employee not belonging to MARKETING dept.
(ii) Change the salary of all employees to 20000.
(iii) Remove the table EMP.

14 Explain nested if statement in C++ with its syntax. **2**

15 Explain Manipulation stage of data processing. **2**

16 Write a program to create an array of N elements, accept a number and location from the user, delete the accepted number from the array and print the new array. **4**

17 Write a C++ program to write the odd numbers from 1 to 100 in a data file NUM.TXT. **3**

18 Consider the following class definition and answer the questions that follow : **3**

```
Class Teacher
{
char tno[10], tname[20], qual[15];
int days;
void assign();
protected:
float rem;

public :
Teacher();
void TEntry();
void Tdisplay();
};
class student
{
Char regno[10], sname[20], course[20];
protected :
int attd, grd;
public:
student();
void ent();
void dsp();
};

Class school : public student, public teacher
{
char sno [12];
char sname[20];
public :
school();
void s_entry();
void s_detail();
};
```

(i)   What type of inheritance is used in the above example?
(ii) Write the names of all the members accessible from member functions of the class school.
(iii) If class school has derived privately from both student and teacher, then name the member functions that could be accessed by the objects of the class school.

19 Explain SQL. **1**

20 Predict the output of the following program : **2**

```
int main() {int x=2;
    switch(x) {
    case 5 : cout<<"Five"; break;
    case 1 : cout<<"One"; break;
    case 2 : cout<<"Two"; break;
    default : cout<<"No output"; break;
    }
}
```

21 Write the html tag to draw a red colour line on the center of the web page. **3**

22 What will the below given html program produce? **3**

```
<html>
<body>
    <ul type=DISC>
        <li>Control Structures</li>
        <li>Introduction to C++</li>
        <li>Basic Concepts</li>
        <li>Pointers</li>
    </ul>

    <ol type='i'>
        <li>DBMS</li>
        <li>HTML</li>
        <li>Emerging Trends</li>
        <li>Web Design</li>

    </ol>
</body>
</html>
```

23   Explain why do we use float data type in C++. Show an example for   **2**
floating point value.

24   Find the output of the following code. Assume that all required header files   **3**
are attached.

```
struct x {int a, b;};

struct y {x c; int d:};

void main(){

x d={5,10};

y f={ {2, 3}, 10};

    y g;

    g=f;

    g.c.a + = 2;

cout<<g.c.a<<  "  "

    <<g.c.b<<  "  "

    <<g.d;

}
```

25   Name the header files to which the following built in functions belong :   **1**
(i)   fabs(x)
(ii)   islower(c)

26   Name the function that C++ program has by default.   **1**

27   Can reserved words of C++ be used as Identifier?   **1**

28 What is the range that the integer data type supports?   **1**

29 What is the use of SQL?   **1**

30 Name any two web browsers.   **1**

31 What is the use of break statement in C++?   **1**

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COMPUTER SCIENCE

(330)

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Note :   (i)   Answer **all** questions.

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(iii)   Use C++ programming language to answer the programming questions.

---

1   What is the use of tellg( ) pointer?   **1**

2   What is the use of the parameter ios :: in?   **1**

3   What is the use of typedef statement.   **1**

4   Write two advantages of mobile computing.   **1**

5   Write one objective of grid computing.   **1**

6   Find the output produced by the following program segment. Assume all   **2**
header functions are imported.

```
Void main( )
{
int a=14;
int *b=&a;
cout<<a<<" "<<*b<<endl;
a++;
cout<<a<<" "<<*b<<endl;
}
```

7 Write any programming applications of OOP.   **2**

8 Write the html tag to display an image known as "nios.jpg" having a height   **2**
of 40 pixels in your webpage.

9 Define a class EXAM in C++ with the following specifications :   **4**

Private Members :

EXAMID integer

EXAM_SUB 20 character

DURATION float

E_TYPE 20 character

Public functions:

A constructor to initialise DURATION as 180 and

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accept( ) to accept the full data

display( ) to display the full data

10 Explain container tag with an example.   **2**

11 What will be the values of the variables 'n', 's' and 'i' after the following   **3**
code is executed?

```
int n=2, s=0, i=6
for(n=12; n<=20; n++)
{
    if(n% 3 !=0)
    s=s+i;
}
cout<<n<< '' <<s<< "" <<i;
```

12 Explain nested if statement in C++ with its syntax.   **2**

13 Write SQL commands for the below given questions based on the below given EMP table. **3**

EmpNo	EMPNAME	GENDER	DEPT	DATE_OF_JOIN	SALARY
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E002A	ANJU	F	MARKETING	2019-08-01	20000.00
E003A	SAHIL	M	HR	2020-01-15	32000.00
E004A	HARSHITHA	F	FINANCE	2020-09-14	30500.00
E005A	RAHUL	M	SALES	2021-07-13	17500.00
E006A	VEENA	F	FINANCE	2022-04-01	18600.00

(i) Display the name of the employee having SALARY more than 25000.

(ii) Modify the column gender to varchar(6).

(iii) Delete the record of SAHIL.

14 Predict the output of the following program : **2**

```
int main() {int x=2;
    switch(x) {
    case 5 : cout<<"Five"; break;
    case 1 : cout<<"One"; break;
    case 2 : cout<<"Two"; break;
    default : cout<<"No output"; break;
    }
}
```

15 Explain sorting stage of data processing. **2**

16 Write a program to create an array of N elements, accept a number and location from the user, delete the accepted number from the array and print the new array. **4**

17 What will the below given html program produce? **3**

```
<html>
<body>
    <ul type=DISC>
        <li>Control Structures</li>
        <li>Introduction to C++</li>
        <li>Basic Concepts</li>
        <li>Pointers</li>
    </ul>

    <ol type='i'>
        <li>DBMS</li>
        <li>HTML</li>
        <li>Emerging Trends</li>
        <li>Web Design</li>

    </ol>
</body>
</html>
```

18 Write the html tag to draw a red colour line on the center of the web page. **3**

19 Expand DCL. **1**

20 Identify how many times the loop gets executed : **2**

```
int n=10;
while (n>=5)
{
    n--;
}
```

21 Write a C++ program to write the odd numbers from 1 to 100 in a data file NUM.TXT. **3**

22 Consider the following class definition and answer the questions that follow : **3**

```
Class Teacher
{
char tno[10], tname[20], qual[15];
int days;
void assign();
protected:
float rem;

public :
Teacher();
void TEntry();
void Tdisplay();
};
class student
{
Char regno[10], sname[20], course[20];
protected :
int attd, grd;
public:
student();
void ent();
void dsp();
};

Class school : public student, public teacher
{
char sno [12];
char sname[20];
public :
school();
void s_entry();
void s_detail();
};
```

(i)   What type of inheritance is used in the above example?
(ii) Write the names of all the members accessible from member functions of the class school.
(iii) If class school has derived privately from both student and teacher, then name the member functions that could be accessed by the objects of the class school.

23 Differentiate between '=' and '= =' operator in C++. **2**

24 Find the output of the following code. Assume that all required header files **3**
are attached.

```
struct x {int a, b;};

struct y {x c; int d:};

void main(){

x d={5,10};

y f={ {2, 3}, 10};

    y g;

    g=f;

    g.c.a + = 2;

cout<<g.c.a<< " "

    <<g.c.b<< " "

    <<g.d;

}
```

25 What is the range that the integer data type supports? **1**

26 Which functions require ctype.h header file to be included in a C++ program? **1**

27 What is the use of break statement in C++? **1**

28 Can reserved words of C++ be used as Identifier? **1**

29 What does the keyword 'default' do in MySQL? **1**

30 Expand WWW. **1**

31 Name the header files to which the following built in functions belong : **1**

(i) fabs(x)

(ii) islower(c)