



# 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 location from the user, delete the accepted number from the array and print the new array. | 4 |

65/ASS/3-330-A ]

2



[ Contd...

**Unnati Educations**

**9899436384, 9654279279**

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 are attached.

3

```
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 header functions are imported.

2

```
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
- 





# 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 of 40 pixels in your webpage. | 2 |
| 7 | Write any two benefits of OOP.                                                                           | 2 |



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

```
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 floating point value. 2

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

```
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
- 





# 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 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 header functions are imported. | 2 |

```
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 of 40 pixels in your webpage. 2
- 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 Explain container tag with an example. 2
- 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 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   |
|-------|-----------|--------|-----------|--------------|----------|
| 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 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 are attached. 3

```
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)
- 

