

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

Roll No.

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Code No. **62/OSS/2**

Set

A

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. **62/OSS/2-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 in the right-hand margin.

- | | | |
|----|---|---|
| 1. | What do you mean by float data type in C++ ? | 1 |
| 2. | Explain unary operator with an example. | 2 |
| 3. | Define constant in C++. | 1 |
| 4. | Explain data abstraction in OOP. | 2 |
| 5. | Explain For Loop with its syntax. | 2 |
| 6. | Write a C++ program to find the smallest of three accepted number a, b, c of type integer. | 2 |
| 7. | What will be the output produced by the following code and also mention how many times the loop gets executed ? Assume all header files are imported. | 3 |

```
void main( )  
{  
int i=0;  
while(i<=15)  
{  
cout<<i<<endl;  
i=i+3;  
}  
}
```



8. What will be the output produced by the below given code snippet ? Assume all header files are included. 1

Consider the value of variable 'var' is 29.

```
if(var < 33)
    cout<< "Rain";
else
    cout<<"No rain";
```

9. What will be the output produced by the below given code snippet ? Assume all header files are imported. 2

```
#include<iostream.h>

void change(int&);

void main( )
{
    int a=5;
    cout<<"a="<<a<<endl;
    change(a);
    cout<<"a="<<a<<endl;
}

void change(int &b)
{
    b=10;
}
```

10. Mention the header file that needs to be included for getchar() to work. 1
11. Name the function that returns True if 'x' is a digit. 1
12. Write a bubble sort program to arrange the elements of the array in ascending order, the array consists of 10 elements. 4



13. Write a C++ program to create a structure TEACHER using the following members. 3

Tno : Integer

TName : String of 20 char

TSalary : Decimal Number

Create a structure variable T1 and assign the values {12, "ANOOP", 50000.5} at the time of initialization.

Print the Teacher name (Tname).

14. Identify the error in the below given C++ code. 1

```
void main( )  
{  
    typedef int a;  
    a b ;  
    b="anoop";  
    cout<<b;  
}
```

15. Define a class named ADMISSION in C++ with the following description. 4

Private members :

ADM_NO - Integer, to accept admission number in the range 10 to 2000, both exclusive

NAME - array of characters, to store the name

CLASS - character, to store the class

FEES - to store the fees

Public members :

READ_DATA() to input data

DISPLAY_DATA() to display the data



16. Answer the questions (i) to (iii) based on the following :

```
class PRODUCT
{
    int code;
    char Item[20];
protected:
    float Qty;
public :
    PRODUCT( );
    void GetIn( );
    void Show( );
};

class WHOLESALER
{
    int Wcode;
protected :
    char Manager[20];
public :
    WHOLESALER( );
    void Enter( );
    void Display( );
};

class SHOWROOM : public PRODUCT, private WHOLESALER
{
    char Name[20], City[20];
public :
    SHOWROOM( );
    void Input( );
    void View( );
};
```

- (i) Which type of inheritance is followed in the above example Single level, Multilevel, Multiple or any other type ?
- (ii) Write the names of all the data members, which are directly accessible by an object of the class SHOWROOM.
- (iii) Write the names of all the member functions which are directly accessible by an object of the class SHOWROOM.



17. Find the output produced by the following program segment. Assume all necessary header files are included. 2

```
void main( )
{
int a=25;
int *b=2a;
    cout<< a << " " << *b <<endl;
    a++;
    cout<< a << " " << *b <<endl;
}
```

18. Write a function in C++ to search for a camera from a binary file "CAMERA.DAT", contains the objects of camera as defined below. The user should enter the model number and the function should search and display the details of the camera. 3

```
class CAMERA
{
    long Model No;
    float Megapixel;
    int zoom;
    char details [100];
public :
    void Enter( )
    {
        cin>>Model No >> Megapixel >> zoom;
        gets(Details);
    }
    void Display( )
    {
        cout<<Model No<<Megapixel( )<<zoom<<Details<<endl;
    }
    long Get Model No( )
    {
        return Model No;
    }
}
```



19. What does open() function do ? 1
20. What does tellg() function return ? 1
21. Explain how data and information are related. 2
22. Observe the below given table "CAB" and write queries for (i), (ii) & (iii). 3

CAB

Vcode	Vname	Make	Color	Capacity	Charges
100	INNOVA	TOYOTA	WHITE	7	15
102	S × 4	SUZUKI	BLUE	4	14
104	C CLASS	MERCEDES	RED	4	35
105	A STAR	SUZUKI	WHITE	3	14
108	INDIGO	TATA	SILVER	3	12

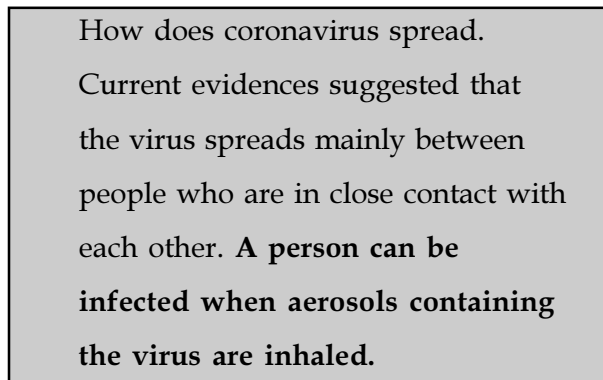
- (i) To display the names of all white coloured vehicles.
- (ii) To decrease the rate of Toyota cabs by Rs. 2/-
- (iii) To delete all cabs having capacity more than 4.

23. What is domain ? 1
24. What is the purpose of Insert Command ? 1
25. What is the purpose of HTML ? 1
26. What will the following do in a webpage ? 2
- < font face = "Arial " size = 4 >
- NIOS



27. Write a HTML program to design a webpage as shown below.

3



- (i) The background of the webpage is yellow.
- (ii) The last sentence of the webpage is bold.
- (iii) A black colour line to be drawn to cover the entire webpage.

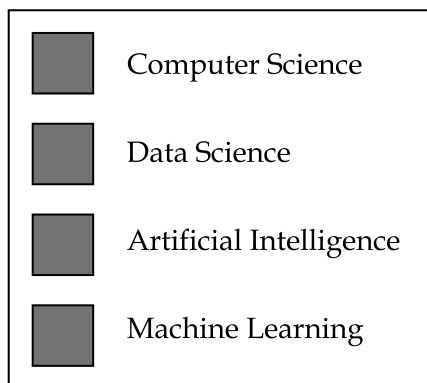
28. Write a HTML program to insert an image in a webpage as per below given specification.

2

- (a) the name of the image is "nios.jpeg", stored in same folder.
- (b) the image should have a border of 5 pixels.

29. Write a HTML program to create the below given list.

3



30. What is mobile software ?

1

31. What is community cloud ?

1

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

Roll No.

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Code No. **62/OSS/2**

Set

B

COMPUTER SCIENCE (330)

Day and Date of Examination _____

Signature of Invigilators 1. _____

2. _____

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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.
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4. Write your Question Paper Code No. **62/OSS/2-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 in the right-hand margin.

-
- | | | |
|----|--|---|
| 1. | Define constant in C++. | 1 |
| 2. | Explain == with an example. | 2 |
| 3. | What do you mean by float data type in C++ ? | 1 |
| 4. | Write a C++ program to find the smallest of three accepted number a, b, c of type integer. | 2 |
| 5. | Explain data abstraction in OOP. | 2 |
| 6. | Explain For Loop with its syntax. | 2 |
| 7. | What will be the output produced by the following code and also mention how many times the loop gets executed ? Assume all required header files are included. | 3 |

```
void main( )  
{  
    int i=0;  
    do  
    {  
        cout << i << endl;  
        i=i+3;  
    } while (i <=15);  
}
```



8. Mention the header file that needs to be included for `getchar()` to work. 1
9. Write a HTML program to insert an image in a webpage as per below given specification. 2
- (a) the name of the image is "nios.jpeg", stored in same folder.
- (b) the image should have a border of 5 pixels.
10. What does `open()` function do ? 1
11. Name the header file that is required by `islower(c)` function. 1
12. Define a class named `ADMISSION` in C++ with the following description. 4

Private members :

ADM_NO - Integer, to accept admission number in the range 10 to 2000, both exclusive

NAME - array of characters, to store the name

CLASS - character, to store the class

FEES - to store the fees

Public members :

READ_DATA() to input data

DISPLAY_DATA() to display the data



13. Answer the questions (i) to (iii) based on the following :

```
class PRODUCT
{
    int code;
    char Item[20];
protected:
    float Qty;
public :
    PRODUCT( );
    void GetIn( );
    void Show( );
};

class WHOLESALER
{
    int Wcode;
protected :
    char Manager[20];
public :
    WHOLESALER( );
    void Enter( );
    void Display( );
};

class SHOWROOM : public PRODUCT, private WHOLESALER
{
    char Name[20], City[20];
public :
    SHOWROOM( );
    void Input( );
    void View( );
};
```

- (i) Which type of inheritance is followed in the above example Single level, Multilevel, Multiple or any other type ?
- (ii) Write the names of all the data members, which are directly accessible by an object of the class SHOWROOM.
- (iii) Write the names of all the member functions which are directly accessible by an object of the class SHOWROOM.



14. What will be the output produced by the below given code snippet ? Assume all header files are included. 1

Consider the value of variable 'var' is 29.

```
if(var < 33)
    cout<< "Rain";
else
    cout<<"No rain";
```

15. Write a bubble sort program to arrange the elements of the array in ascending order, the array consists of 10 elements. 4

16. Write a C++ program to create a structure TEACHER using the following members. 3

Tno : Integer

TName : String of 20 char

TSalary : Decimal Number

Create a structure variable T1 and assign the values {12, "ANOOP", 50000.5} at the time of initialization.

Print the Teacher name (Tname).

17. What will the following do in a webpage ? 2

```
< font face = "Arial " size = 4 >
NIOS </font >
```

18. Write a HTML program to design a webpage as shown below. 3

How does coronavirus spread.
Current evidences suggested that
the virus spreads mainly between
people who are in close contact with
each other. **A person can be
infected when aerosols containing
the virus are inhaled.**

- (i) The background of the webpage is yellow.
- (ii) The last sentence of the webpage is bold.
- (iii) A black colour line to be drawn to cover the entire webpage.



19. What does tellg() function return ? 1

20. Identify the error in the below given C++ code. 1

```
void main( )  
{  
    typedef int a;  
    a b ;  
    b="anoop";  
    cout<<b;  
}
```

21. What do you mean by data capture ? 2

22. Observe the below given table CAB and write queries for (i), (ii) & (iii). 3

CAB

Vcode	Vname	Make	Color	Capacity	Charges
100	INNOVA	TOYOTA	WHITE	7	15
102	S × 4	SUZUKI	BLUE	4	14
104	C CLASS	MERCEDES	RED	4	35
105	A STAR	SUZUKI	WHITE	3	14
108	INDIGO	TATA	SILVER	3	12

(i) To display the names of all seven capacity cabs.

(ii) To increase the rate of silver cabs by Rupees '2'.

(iii) To delete all the cabs.

23. What is the purpose of Insert Command ? 1

24. What is domain ? 1

25. What is the use of < body > -- </body> ? 1



26. Find the output produced by the following program segment. Assume all necessary header files are included. 2

```
void main( )
{
int a =25;
int *b=2a;
    cout<< a << " " << *b <<endl;
    a++;
    cout<< a << " " << *b <<endl;
}
```

27. Write a function in C++ to search for a camera from a binary file "CAMERA.DAT", contains the objects of camera as defined below. The user should enter the model number and the function should search and display the details of the camera. 3

```
class CAMERA
{
    long Model No;
    float Megapixel;
    int zoom;
    char details [100];
public :
    void Enter( )
    {
        cin>>Model No >> Megapixel >> zoom;
        gets(Details);
    }
    void Display( )
    {
        cout<<Model No<<Megapixel( )<<zoom<<Details<<endl;
    }
    long Get Model No( )
    {
        return Model No;
    }
}
```



28. What will be the output produced by the below given code snippet ? Assume all header files are imported. 2

```
#include<iostream.h>
void change(int&);
void main( )
{
    int a=5;
    cout<<"a="<<a<<endl;
    change(a);
    cout<<"a="<<a<<endl;
}
void change(int &b)
{
    b=10;
}
```

29. Write a < HTML > program to create the following list : 3

<input type="checkbox"/>	COVAXIN
<input type="checkbox"/>	COVISHIELD
<input type="checkbox"/>	SPUTNIK V
<input type="checkbox"/>	SPUTNIK LITE

30. What is community cloud ? 1
31. What is mobile software ? 1

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Roll No.

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Set

C

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2. _____

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4. Write your Question Paper Code No. **62/OSS/2-C** on the Answer-Book.



COMPUTER SCIENCE

(330)

Time : 3 Hours]

[Maximum Marks : 60

- Note :**
- (i) Answer **all** questions.
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-
1. What will be the output produced by the below given code snippet ? Assume all header files are included. 1
Consider the value of variable 'var' is 29.

```
if(var < 33)
    cout<< "Rain";
else
    cout<<"No rain";
```
 2. Explain -- with an example. 2
 3. Define constant in C++. 1
 4. Explain For Loop with its syntax. 2
 5. Write a C++ program to find the smallest of three accepted number a, b, c of type integer. 2
 6. Explain data abstraction in OOP. 2
 7. What will be the output produced by the following code and also mention how many times the loop gets executed ? Assume all required header files are included. 3

```
void main( )
{
    int i ;
    for (i=1; i<=15; i=i+3)
    {
        cout<< i <<endl;
    }
}
```



8. What does open() function do ? 1
9. What will the following do in a webpage ? 2
< font face = "Arial " size = 4 >
NIOS
10. What do you mean by float data type in C++ ? 1
11. What does Strcpy(S1, S2) do ? 1
12. Define a class named ADMISSION in C++ with the following description. 4
Private members :
ADM_NO - Integer, to accept admission number in the range 10 to 2000, both exclusive
NAME - array of characters, to store the name
CLASS - character, to store the class
FEES - to store the fees
Public members :
READ_DATA() to input data
DISPLAY_DATA() to display the data
13. Write a HTML program to design a webpage as shown below. 3
- How does coronavirus spread.
Current evidences suggested that
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people who are in close contact with
each other. **A person can be
infected when aerosols containing
the virus are inhaled.**
- (i) The background of the webpage is yellow.
(ii) The last sentence of the webpage is bold.
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16. Write a function in C++ to search for a camera from a binary file "CAMERA.DAT", contains the objects of camera as defined below. The user should enter the model number and the function should search and display the details of the camera. 3

```
class CAMERA
{
    long Model No;
    float Megapixel;
    int zoom;
    char details [100];
public :
    void Enter( )
    {
        cin>>Model No >> Megapixel >> zoom;
        gets(Details);
    }
    void Display( )
    {
        cout<<Model No<<Megapixel( )<<zoom<<Details<<endl;
    }
    long Get Model No( )
    {
        return Model No;
    }
}
```

17. Write a HTML program to insert an image in a webpage as per below given specification. 2
- (a) the name of the image is "nios.jpeg", stored in same folder.
 - (b) the image should have a border of 5 pixels.

18. Write a C++ program to create a structure TEACHER using the following members. 3

Tno : Integer

TName : String of 20 char

TSalary : Decimal Number

Create a structure variable T1 and assign the values {12, "ANOOP", 50000.5} at the time of initialization.

Print the Teacher name (Tname).



19. Identify the error in the below given C++ code. 1

```
void main( )  
{  
    typedef int a;  
    a b ;  
    b="anoop";  
    cout<<b;  
}
```

20. What is community cloud ? 1

21. What do you mean by variable length record ? 2

22. Observe the below given CAB table and write queries for (i), (ii) & (iii). 3

CAB

Vcode	Vname	Make	Color	Capacity	Charges
100	INNOVA	TOYOTA	WHITE	7	15
102	S × 4	SUZUKI	BLUE	4	14
104	C CLASS	MERCEDES	RED	4	35
105	A STAR	SUZUKI	WHITE	3	14
108	INDIGO	TATA	SILVER	3	12

(i) To display the colour of seven capacity cabs.

(ii) To delete the silver colour cabs.

(iii) To modify the 'C Class' cab as 5 seater.

23. What does tellg() function return ? 1

24. What is mobile software ? 1

25. What is the use of <center> tag in HTML ? 1



26. What will be the output produced by the below given code snippet ? Assume all header files are imported. 2

```
#include<iostream.h>
```

```
void change(int&);
```

```
void main( )
```

```
{
```

```
int a=5;
```

```
cout<<"a="<<a<<endl;
```

```
change(a);
```

```
cout<<"a="<<a<<endl;
```

```
}
```

```
void change(int &b)
```

```
{
```

```
b=10;
```

```
}
```



27. Answer the questions (i) to (iii) based on the following :

```
class PRODUCT
{
    int code;
    char Item[20];
protected:
    float Qty;
public :
    PRODUCT( );
    void GetIn( );
    void Show( );
};

class WHOLESALER
{
    int Wcode;
protected :
    char Manager[20];
public :
    WHOLESALER( );
    void Enter( );
    void Display( );
};

class SHOWROOM : public PRODUCT, private WHOLESALER
{
    char Name[20], City[20];
public :
    SHOWROOM( );
    void Input( );
    void View( );
};
```

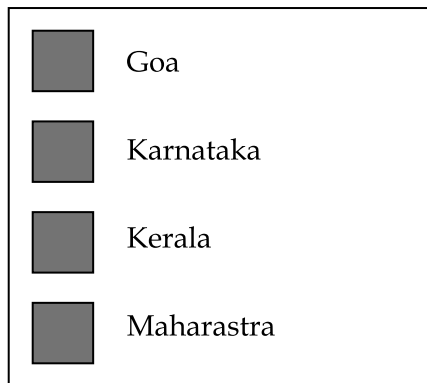
- (i) Which type of inheritance is followed in the above example Single level, Multilevel, Multiple or any other type ?
- (ii) Write the names of all the data members, which are directly accessible by an object of the class SHOWROOM.
- (iii) Write the names of all the member functions which are directly accessible by an object of the class SHOWROOM.



28. Find the output produced by the following program segment. Assume all necessary header files are included. 2

```
void main()  
{  
    int a=25;  
    int *b=2a;  
    cout<< a << " " << *b <<endl;  
    a++;  
    cout<< a << " " << *b <<endl;  
}
```

29. Write a HTML program to create the following list. 3



30. What is the purpose of Insert Command ? 1

31. What is domain ? 1

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