

This Question Paper consists of 31 questions and 6 printed pages.

Roll No.

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Code No. **64/OSS/2**

SET

A

COMPUTER SCIENCE

(330)

Day and Date of Examination : _____

Signature of Invigilators : 1. _____

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General Instructions :

1. Candidate must write his/her Roll Number on the first page of the Question Paper.
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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 side.
 - (iii) Use C++ programming language to answer the programming questions.

-
- | | |
|--|---|
| 1. Define sorting. | 1 |
| 2. Explain normalization in database. | 1 |
| 3. Define Programming Language. | 1 |
| 4. What is HTML ? | 1 |
| 5. Define the term relational database. | 1 |
| 6. Contrast between Data and Information. | 2 |
| 7. Differentiate between DDL and DML. | 2 |
| 8. Contrast between Physical versus logical records. | 2 |
| 9. Compare between procedure oriented and problem oriented language. | 2 |
| 10. What is communication system ? | 1 |
| 11. Name the header files to the function gets() belong. | 1 |
| 12. Name the header files to the function puts() belong. | 1 |
| 13. Explain the term Data hiding. | 1 |



14. Define Class in C++. 1
15. Write a C++ statement using switch-case to display "ODD DIGIT" or "EVEN DIGIT" and "NOT DIGIT" otherwise. 2
16. Explain nested if-else branch statement. 1
17. Write a function C++ to print the sum of all odd numbers till 100. 2
18. Explain the continue and the break statement. 2
19. What will be the value of sum after the following program is executed ? 3
- ```
void main()
{
 int sum, k;
 sum = 1;
 k = 9;
 do
 {
 k = k - 1;
 sum = 2 * sum;
 }
 while(k>0);
 cout << sum;
}
```
20. Write the output of the following program : 1
- ```
#define FALSE - 1
#define TRUE 1
#define NULL 0
main()
{
    if(NULL)
        cout<<"NULL";
    else if(FALSE)
        cout<<"TRUE";
    else
        cout<<"FALSE";
}
```



21. Write a function VERIFY() in C++ that accepts an alphabet and checks whether it is in uppercase or not. 3

22. Predict the output of the following program : 2

```
#include<iostream.h>

void main()
{
    double ch;
    cout<<"enter a value btw 1 to 2:";
    cin>>ch;
    switch(ch)
    {
        case 1: cout<<"1";
        break;
        case 2: cout<<"2";
        break;
    }
}
```

23. Define a class Employee with the following specifications : 3

Private Members :

Employee code Numeric

Employee name String

Division String

Organization String

Public Members :

- A constructor that initializes all numeric members with 0 and all strings with "ABC".
- getdata()-that accepts the entire data
- showdata()-that displays the entire data



24. Consider the following class definition and answer the questions that follow : 3

```
class Bags
{
    char bag_type[10];
protected:
    float price;
    void deal_price(float);
public:
    Bags();
    char choice;
    void baginput();
    void bagshow();
};
class MyBags : public Bags
{
    char mbag_name[10];
    float weight;
protected:
    int no_chains;
public:
    void MyInput();
};
```

- (i) Which type of inheritance is shown in the above example ?
(ii) Which all data members are accessible from MyInput() ?
(iii) Name the member functions which are accessible from the object of class MyBags.
25. Write a program to find the average number in an integer array of size 10. 4
26. Explain implicit and explicit type conversion. 1
27. Declare a structure DATE having Day(int), Month(int), Year(int). Thereafter create another class EMPLOYEE having the following members : 3
- | | |
|-----------------|---------------------|
| Employee_code | of type integer |
| Name | of type string |
| Date of Birth | an instance of DATE |
| Date of Joining | an instance of DATE |
- Write a C++ statement to accept the value of Date of Joining from the user and print the complete record on the screen.



28. Give a C++ statements to do the following : 2
- (i) Create an float pointer fptr
 - (ii) Make ptr hold the address of an integer variable through pointer type casting.
29. Assuming the class SERVICE CENTRE defined below, write a user defined function to read the objects of SERVICE CENTRE from the binary file Service.dat and display the records of only 'XYZ' Brand car. 4
- ```

class SERVICE CENTRE
{
 int car_number;
 char car_name[13];
 char Entrdate;
 float valuation;
 char Brand[20];
public:
 void enterdata()
 {
 cin>>car_number;
 gets(car_name);
 gets(Entrdate);
 cin>>valuation;
 gets(Brand);
 }
 void showdata()
 {
 Cout<<car_number<<car_name<<Entrdate<<valuation<<Brand;
 }
 char[]getbrand()
 {
 return Brand;
 }
};

```
30. Explain Multiple and Multilevel inheritance. 3
31. Describe any three essential characteristics of cloud computing. 3

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Code No. **64/OSS/2**

SET

**B**

## COMPUTER SCIENCE

(330)

Day and Date of Examination : \_\_\_\_\_

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

- |                                                                                                               |   |
|---------------------------------------------------------------------------------------------------------------|---|
| 1. Define Programming Language.                                                                               | 1 |
| 2. Define a record.                                                                                           | 1 |
| 3. Define sorting.                                                                                            | 1 |
| 4. Explain normalization in database.                                                                         | 1 |
| 5. Compare between procedure oriented and problem oriented language.                                          | 2 |
| 6. What are the features of email ?                                                                           | 2 |
| 7. Define the term relational database.                                                                       | 1 |
| 8. Define the term information.                                                                               | 1 |
| 9. Differentiate between DDL and DML.                                                                         | 2 |
| 10. Contrast between Physical versus logical records.                                                         | 2 |
| 11. Write a C++ statement using switch-case to display "ODD DIGIT" or "EVEN DIGIT" and "NOT DIGIT" otherwise. | 2 |
| 12. Explain nested if-else branch statement.                                                                  | 1 |
| 13. Name the header files to the function gets() belong.                                                      | 1 |
| 14. Name the header files to the function puts() belong.                                                      | 1 |



15. Write the differences between multiple inheritance and multilevel inheritance. 1
16. Define the IMG tag. 1
17. Write a function C++ to print the sum of all odd numbers till 100. 2
18. Write the output of the following program : 1
- ```
#define FALSE - 1
#define TRUE 1
#define NULL 0
main()
{
    if(NULL)
        cout<<"NULL";
    else if(FALSE)
        cout<<"TRUE";
    else
        cout<<"FALSE";
}
```
19. Declare a class TIME in C++ that accepts three members hour, minute and seconds. Define a constructor to set the initial time of User's preference. 3
20. Explain the continue and the break statement. 2
21. What will be the value of sum after the following program is executed ? 3
- ```
void main()
{
 int sum, k;
 sum = 1;
 k = 9;
 do
 {
 k = k - 1;
 sum = 2 * sum;
 }
 while(k>0);
 cout << sum;
}
```



22. Create two classes DM and DB which store the value of distances. DM stores it in meter and centimetres. DB store it in feet and inches. Write a program that can read values for the class objects. 3

23. Define a class Employee with the following specifications : 3

Private Members :

Employee code          Numeric

Employee name          String

Division                  String

Organization           String

Public Members :

- A constructor that initializes all numeric members with 0 and all strings with "ABC".
- getdata()-that accepts the entire data
- showdata()-that displays the entire data

24. Predict the output of the following program : 2

```
#include<iostream.h>

void main()
{
 double ch;

 cout<<"enter a value btw 1 to 2:";

 cin>>ch;

 switch(ch)
 {
 case 1: cout<<"1";
 break;
 case 2: cout<<"2";
 break;
 }
}
```



25. Write a program to find the average number in an integer array of size 10. 4
26. Illustrate the use of pointer to array with a program. 2
27. Assuming the class SERVICE CENTRE defined below, write a user defined function to read the objects of SERVICE CENTRE from the binary file Service.dat and display the records of only 'XYZ' Brand car. 4
- ```
class SERVICE CENTRE
{
    int car_number;
    char car_name[13];
    char Entrdate;
    float valuation;
    char Brand[20];
public:
    void enterdata()
    {
        cin>>car_number;
        gets(car_name);
        gets(Entrdate);
        cin>>valuation;
        gets(Brand);
    }
    void showdata()
    {
        Cout<<car_number<<car_name<<Entrdate<<valuation<<Brand;
    }
    char[]getbrand()
    {
        return Brand;
    }
};
```
28. Explain implicit and explicit type conversion. 1



29. Declare a structure DATE having Day(int), Month(int), Year(int). Thereafter create another class EMPLOYEE having the following members : 3

Employee_code	of type integer
Name	of type string
Date of Birth	an instance of DATE
Date of Joining	an instance of DATE

Write a C++ statement to accept the value of Date of Joining from the user and print the complete record on the screen.

30. Explain Multiple and Multilevel inheritance. 3

31. Define and explain Green Computing in detail. 3

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C

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(330)

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COMPUTER SCIENCE

(330)

Time : 3 Hours]

[Maximum Marks : 60

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

- | | | |
|-----|---|---|
| 1. | What is HTML ? | 1 |
| 2. | Describe Query language. | 3 |
| 3. | Explain normalization in database. | 1 |
| 4. | Define sorting. | 1 |
| 5. | Explain web page and browser. | 2 |
| 6. | Compare between procedure oriented and problem oriented language. | 2 |
| 7. | Contrast between Physical versus logical records. | 2 |
| 8. | Define the term relational database. | 1 |
| 9. | Define a record. | 1 |
| 10. | Define DCL. | 1 |
| 11. | Explain nested if-else branch statement. | 1 |
| 12. | Write a C++ statement using switch-case to display "ODD DIGIT" or "EVEN DIGIT" and "NOT DIGIT" otherwise. | 2 |
| 13. | Explain the term Abstraction from in C++. | 1 |



14. Explain the term Inheritance C++. 1
15. Name the header files to the function gets() belong. 1
16. Name the header files to the function puts() belong. 1
17. Write a function C++ to print the sum of all odd numbers till 100. 2
18. Write a function VERIFY() in C++ that accepts an alphabet and checks whether it is in uppercase or not. 3
19. What is the output of this program ? 4

```
void main()
{
    int i=122;
    while(i!=97)
        i--;
    while(i>65)
        i--;
    cout<<char(i);
}
```

20. Write the output of the following program : 1

```
#define FALSE - 1
#define TRUE 1
#define NULL 0
main()
{
    if(NULL)
        cout<<"NULL";
    else if(FALSE)
        cout<<"TRUE";
    else
        cout<<"FALSE";
}
```



21. Explain the continue and the break statement. 2

22. Obtain the minimum element from an array of size 10. 3

23. Consider the following class definition and answer the questions that follow : 3

```
class Bags
{
    char bag_type[10];
protected:
    float price;
    void deal_price(float);
public:
    Bags();
    char choice;
    void baginput();
    void bagshow();
};
class MyBags : public Bags
{
    char mbag_name[10];
    float weight;
protected:
    int no_chains;
public:
    void MyInput();
};
```

- (i) Which type of inheritance is shown in the above example ?
- (ii) Which all data members are accessible from MyInput() ?
- (iii) Name the member functions which are accessible from the object of class MyBags.

24. Define a class Employee with the following specifications : 3

Private Members :

Employee code Numeric

Employee name String

Division String

Organization String

Public Members :

- A constructor that initializes all numeric members with 0 and all strings with "ABC".
- getdata()-that accepts the entire data
- showdata()-that displays the entire data



25. Predict the output of the following program : 2

```
#include<iostream.h>

void main()
{
    double ch;
    cout<<"enter a value btw 1 to 2:";
    cin>>ch;
    switch(ch)
    {
        case 1: cout<<"1";
        break;
        case 2: cout<<"2";
        break;
    }
}
```

26. Explain Multiple and Multilevel inheritance. 3

27. Give a C++ statements to do the following : 2

- (i) Create an float pointer fptr
- (ii) Make ptr hold the address of an integer variable through pointer type casting.

28. Declare a structure Vector having x-component, y-component and z-component : 2

x of type integer
y of type integer
z of type integer

Write a C++ statement to read and write a struct variable type.



29. Assuming the class SERVICE CENTRE defined below, write a user defined function to read the objects of SERVICE CENTRE from the binary file Service.dat and display the records of only 'XYZ' Brand car. 4

```
class SERVICE CENTRE
{
    int car_number;
    char car_name[13];
    char Entrdate;
    float valuation;
    char Brand[20];
public:
    void enterdata()
    {
        cin>>car_number;
        gets(car_name);
        gets(Entrdate);
        cin>>valuation;
        gets(Brand);
    }
    void showdata()
    {
        Cout<<car_number<<car_name<<Entrdate<<valuation<<Brand;
    }
    char[]getbrand()
    {
        return Brand;
    }
};
```

30. Explain implicit and explicit type conversion. 1
31. Explain Saas, Paas, Iaas in cloud computing. 3

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