

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

Roll No. 

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Code No. 65/ESS/4

SET 

A
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**COMPUTER SCIENCE**  
**(330)**

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

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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. 65/ESS/4, Set-

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 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) log(x)   |   |
|   | (ii) isalpha(c)  |   |
| 2 | Is 7 and '7' the same according to C++? Justify your answer.   | 1 |
| 3 | Can an Identifier in C++ contain_ (underscore)?  | 1 |
| 4 | What do you mean by software virtualization?   | 1 |
| 5 | What do you mean by hybrid cloud?  | 1 |
| 6 | Explain empty tag with an example.   | 2 |
| 7 | Write any two uses of creating modules during programming.   | 2 |
| 8 | Explain if... else statement in C++ with its syntax.   | 2 |
| 9 | Write a program to create an array of N elements, using selection sort, sort the elements of the array in ascending order and print the new array. | 4 |

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2



[ Contd...

- 10 Find the output of the following code. Assume that all required header files are attached. 1

```
#include<iostream.h>
int main(){
int A[] = {10, 12, 15, 17, 20, 20, 30};
int i;
for (i=0; i < 6; i++){
    If (A[i] % 2 == 0)
        A[i] /= 2;
    If (A[i] % 5 == 0)
        A[i] /= 5;
    }
for (i = 0; i < 6; i++)
    cout<< A[i] << "#";
return 0;
}
```

- 11 struct str 3

```
{
int a;
int b;
int c;
};
struct str1
{
char n[20];
str x;
}
void main()
{
str1 p;
}
```

How will you access n, a and b of the above structure?

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

```
void main()
{
int a = 100;
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 EMPNO AND SALARY of the employees belonging to MARKETING dept.  
(ii) Change the salary of Rahul to 18500.00  
(iii) Delete the record of the employee number E006A
- 14 Identify how many times the loop gets executed: 2

```
int n = 10 ;  
while (n >=5)  
{  
    n = n-2 ;  
}
```

- 15 Define the terms Sorting and Summarizing. 2

- 16 Define a class PRIME\_PACK in C++ with the following specifications 4

Private members :

PACKID integer  
PACK\_NAME 20 character  
VALIDITY float  
PACK\_TYPE 20 character

Public functions :

A constructor to initialise VALIDITY as 365 and PACK\_TYPE as GOLD  
accept() to accept the full data  
display() to display the full data



- 17 Class one { 4
- ```

    int A1;
    protected:
    float A2;
    public: one();
           void Get1(); void show1(); };
Class Two: private one {
    int B1;
    protected: float B2;
    public: Two(); void Get2(); void show2(); };

Class Three: public Two {
    int C1;
    public: Three(); void Get3(); void show3(); };
void main() {
    Three T; //statement 1
    _____ //statement 2
}

```
- (i) Which type of inheritance is illustrated in above example?
- (ii) Write the names of all member functions which are directly accessible by the object T of class Three.
- (iii) Write statement 2 to call function show2() from the object T.
- 18 Write a C++ program to write the even numbers from 2 to 100 in a data file NUM.TXT. 3
- 19 Define domain in databases. 1
- 20 Write the html tag to display an image known as "nios.jpg" having a width of 40 pixels in your webpage. 2



21 What will the below given html program produce?

3

```
<html>
<body>

    <ul>
        <li>Control Structures</li>
        <li>Introduction to C++ </li>
        <li>Basic Concepts </li>
        <li>Pointers </li>
    </ul>

    <ol type = '1' START = 5>
        <li>DBMS</li>
        <li>HTML</li>
        <li>Emerging Trends</li>
        <li>Web Design</li>
    </ol>
</body>
</html>
```

22 Write the html tag to assign background colour of the webpage as green and the text colour as red.

3

23 What do you mean by string literal in C++? Support with an example.

2



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

```
#include<iostream.h>

void replace (char s[]) {
for(int i=0; s[i]!='\0'; i++) {
    if ((i%2!=0) && s[i] != s[i+1])
    {
        s[i] = '@'
    }
else if (s[i] == s[i+1]) {
    s[i+1] = '!';
    i++;
    }
}
}

int main() { char str[] = "SUCCES";
    replace (str);
    cout << str;
    return 0;
}
```

- 25** What is the use of continue statement in C++? **1**
- 26** What do you mean by formal parameters? **1**
- 27** What is the use of the parameter ios :: out? **1**



- 28 What is the use of tellp() pointer? 1
- 29 Define foreign key. 1
- 30 Where do we see the output of a html document? 1
- 31 What is the use of enumerated data type? 1

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Code No. 65/ESS/4

SET

**B**

**COMPUTER SCIENCE**  
**(330)**

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

Signature of Invigilators

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General Instructions :

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- 4 Write your Question Paper Code No. 65/ESS/4, Set-**B** on the Answer-Book.

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1



[ Contd...

**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.
- 

- |          |                                                                                                         |          |
|----------|---------------------------------------------------------------------------------------------------------|----------|
| <b>1</b> | What is the use of enumerated data type?                                                                | <b>1</b> |
| <b>2</b> | What is the use of tellp() pointer?                                                                     | <b>1</b> |
| <b>3</b> | What is the use of the parameter ios :: out?                                                            | <b>1</b> |
| <b>4</b> | Write one advantage of Grid computing.                                                                  | <b>1</b> |
| <b>5</b> | What do you mean by Green computing?                                                                    | <b>1</b> |
| <b>6</b> | Write the html tag to display an image known as "nios.jpg" having a width of 40 pixels in your webpage. | <b>2</b> |
| <b>7</b> | Write any two advantages of OOP.                                                                        | <b>2</b> |

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2



[ Contd...

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

```
void main()
{
int a = 100;
int *b = &a;
cout<<a<<" "<<*b<<endl;
a++;
cout<<a<<" "<<*b<<endl;
}
```

- 9 Define a class PRIME\_PACK in C++ with the following specifications 4

Private members :

PACKID integer

PACK\_NAME 20 character

VALIDITY float

PACK\_TYPE 20 character

Public functions :

A constructor to initialise VALIDITY as 365 and PACK\_TYPE as GOLD

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 = n-2 ;
}
```



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

```
#include<iostream.h>
void replace (char s[]) {
for(int i=0; s[i]!='\0'; i++) {
    if ((i%2!=0) && s[i] != s[i+1])
    {
        s[i] = '@'
    }
else if (s[i] == s[i+1]) {
    s[i+1] = '!';
    i++;
    }
}
}
int main() { char str[]= "SUCCES";
    replace (str);
    cout << str;
    return 0;
}
```

- 12 Explain empty 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 belonging to MARKETING or SALES dept.
- (ii) Add a new column mobile int(10)
- (iii) Delete the record of the employees whose salary is less than 15000.



- 14 Explain if... else statement in C++ with its syntax. 2
- 15 Explain Calculation stage of Data Processing with an example. 2
- 16 Write a program to create an array of N elements, using selection sort, sort the elements of the array in ascending order and print the new array. 4
- 17 Write a C++ program to write the even numbers from 2 to 100 in a data file NUM.TXT. 3

- 18 Class one { 4
- ```

    int A1;
    protected:
    float A2;
    public: one();
        void Get1(); void show1(); };

```

```

Class Two: private one {
    int B1;
    protected: float B2;
    public: Two(); void Get2(); void show2(); };

```

```

Class Three: public Two {
    int C1;
    public: Three(); void Get3(); void show3(); };

```

```

void main() {
    Three T; //statement 1
    _____ //statement 2
}

```

- (i) Which type of inheritance is illustrated in above example?
- (ii) Write the names of all member functions which are directly accessible by the object T of class Three.
- (iii) Write statement 2 to call function show2() from the object T.



19 Define Normalization. 1

20 Find the output of the following code. Assume that all required header files are attached. 1

```
#include<iostream.h>

int main(){

int A[] = {10, 12, 15, 17, 20, 20, 30};

int i;

for (i=0; i < 6; i++){

    If (A[i] % 2 == 0)

        A[i] /= 2;

    If (A[i] % 5 == 0)

        A[i] /= 5;

}

for (i=0; i < 6; i++)

    cout<< A[i] << "#";

return 0;

}
```

21 Write the html tag to assign background colour of the webpage as green and the text colour as red. 3



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

```
<html>
<body>
    <ul>
        <li>Control Structures</li>
        <li>Introduction to C++ </li>
        <li>Basic Concepts </li>
        <li>Pointers </li>
    </ul>
    <ol type = '1' START = 5>
        <li>DBMS</li>
        <li>HTML</li>
        <li>Emerging Trends</li>
        <li>Web Design</li>
    </ol>
</body>
</html>
```

**23** Explain the postfix operation of C++ with an example. **2**

**24** struct str **3**

```
{
int a;
int b;
int c;
};
struct str1
{
char n[20];
str x;
}
void main()
{
str1 p;
}
```

How will you access n, a and b of the above structure?



- 25 Name the header files to which the following built in functions belong. 1
- (i) `log(x)`
  - (ii) `isalpha(c)`
- 26 When will `strcmp(S1, S2)` return 0 (zero)? 1
- 27 Can an Identifier in C++ contain `_` (underscore)? 1
- 28 Is 7 and '7' the same according to C++? Justify your answer. 1
- 29 What do you mean by Conceptual Data Model? 1
- 30 Can Multiple tags be applied together in HTML, Show an example. 1
- 31 What is the use of continue statement in C++? 1

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Code No. **65/ESS/4**

SET

<b>C</b>
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**COMPUTER SCIENCE  
(330)**

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

Signature of Invigilators

1. \_\_\_\_\_

2. \_\_\_\_\_

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- 4 Write your Question Paper Code No. **65/ESS/4, Set-C** on the Answer-Book.

65/ESS/4-330-C ]

1



[ Contd...

# 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 tellp() pointer?  | 1 |
| 2 | What is the use of the parameter ios :: out?   | 1 |
| 3 | What is the use of enumerated data type?   | 1 |
| 4 | Define the term Refurbish.   | 1 |
| 5 | What is the use of ENERGY STAR certified technology?   | 1 |
| 6 | Find the output produced by the following program segment. Assume all header functions are imported. | 2 |

```
void main()
{
int a = 100;
int *b = &a;
cout<<a<<" "<<*b<<endl;
a++;
cout<<a<<" "<<*b<<endl;
}
```



- 7 What is the use of partitioning a program into individual components? 2
- 8 Write the html tag to display an image known as "nios.jpg" having a width of 40 pixels in your webpage. 2

- 9 Define a class PRIME\_PACK in C++ with the following specifications 4

Private members :

PACKID integer

PACK\_NAME 20 character

VALIDITY float

PACK\_TYPE 20 character

Public functions :

A constructor to initialise VALIDITY as 365 and PACK\_TYPE as GOLD

accept() to accept the full data

display() to display the full data

- 10 Explain empty tag with an example. 2

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

```
#include<iostream.h>
void replace (char s[]) {
for(int i=0; s[i]!='\0'; i++) {
    if ((i%2==0) && s[i] != s[i+1])
    {
        s[i] = '@'
    }
else if (s[i] == s[i+1]) {
    s[i+1] = '!';
    i++;
    }
}
}
int main() { char str[] = "SUCCES";
    replace (str);
    cout << str;
    return 0;
}
```



12 Explain if... else 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 details of the male employee having salary less than 20,000.
- (ii) Drop the column gender.
- (iii) Change the gender to 'Male' for the male employees.

14 Find the output of the following code. Assume that all required header files are attached. 1

```
#include<iostream.h>
int main(){
int A[] = {10, 12, 15, 17, 20, 20, 30};
int i;
for (i = 0; i < 6; i++){
    If (A[i] % 2 == 0)
        A[i] / = 2;
    If (A[i] % 5 == 0)
        A[i] / = 5;
}
for (i = 0; i < 6; i++)
    cout<< A[i] << "#";
return 0;
}
```



15 Name the four stages that come in the manipulation step of data processing. 2

16 Write a program to create an array of N elements, using selection sort, sort the elements of the array in ascending order and print the new array. 4

17 What will the below given html program produce? 3

```
<html>
<body>

  <ul>
    <li>Control Structures</li>
    <li>Introduction to C++ </li>
    <li>Basic Concepts </li>
    <li>Pointers </li>
  </ul>
  <ol type = '1' START = 5>
    <li>DBMS</li>
    <li>HTML</li>
    <li>Emerging Trends</li>
    <li>Web Design</li>
  </ol>
</body>
</html>
```

18 Write the html tag to assign background colour of the webpage as green and the text colour as red. 3

19 Define Cartesian Product of two tables. 1



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

```
int n = 10 ;
while (n >=5)
{
    n = n-2 ;
}
```

**21** Write a C++ program to write the even numbers from 2 to 100 in a data file NUM.TXT. **3**

**22** Class one { **4**

```
    int A1;
    protected:
    float A2;
    public: one();
           void Get1(); void show1(); };
Class Two: private one {
    int B1;
    protected: float B2;
    public: Two(); void Get2(); void show2(); };
Class Three: public Two {
    int C1;
    public: Three(); void Get3(); void show3(); };
void main() {
    Three T; //statement 1
    _____ //statement 2
}
```

- (i) Which type of inheritance is illustrated in above example?
- (ii) Write the names of all member functions which are directly accessible by the object T of class Three.
- (iii) Write statement 2 to call function show2() from the object T.



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

24 struct str 3

```
{  
int a;  
int b;  
int c;  
};  
struct str1  
{  
char n[20];  
str x;  
}  
void main()  
{  
str1 p;  
}
```

How will you access n, a and b of the above structure?

25 Is 7 and '7' the same according to C++? Justify your answer. 1

26 What do you mean by local variable? 1

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



- 28 Can an Identifier in C++ contain\_ (underscore)? 1
- 29 Define Schema. 1
- 30 What is the use of <pre> .. </pre> tag in HTML. 1
- 31 Name the header files to which the following built in functions belong. 1
- (i) log(x)
  - (ii) isalpha(c)

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