

This Question Paper consists of 6 questions and 7 printed pages.

Roll No.

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Code No. 59/OSS/2

SET

C

**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.
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COMPUTER SCIENCE

(330)

Time : 3 Hours]

[Maximum Marks : 60

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- 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.
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- 1 Define the following : 4×1=4
- (a) Taskbar
 - (b) FTP
 - (c) Sorting
 - (d) Telnet
- 2 (a) Explain Data Transmission Modes briefly. 2
- (b) Describe the functions of the following input devices : 3×2=6
- (i) Keyboard
 - (ii) Scanner
 - (iii) Mouse
- (c) Explain the Data Processing Cycle. 2
- (d) Classify Computer Language. 2



- 3 (a) Name the header files to which following built-in function belong : 2×1=2
- (i) getchar()
 - (ii) putchar()
- (b) Explain the branch statement if-else with illustration. 2
- (c) Explain the following terms with examples from C++. 2×2=4
- (i) Data hiding
 - (ii) Polymorphism
- (d) Write a C++ statement using Conditional Operator to display maximum between three numbers a, b, c. 2
- (e) Write a function in C++ to calculate the sum of digits of a number. 2

- 4 (a) Find the syntax error from the following program. Justify each error. 2

```
#include<iostream.h>
void display(float p)
{
    cout<<' The argument is'<<p;
}
void main ( )
{
    float q = 11.1;
    display (p);
}
```



- (b) Write the output of the following program : 3

```
#include<iostream.h>
int p=4
int change (int &v, int n=1)
{
    v=v*n;
    n=v--/4;
}
void main ()
{
    int p=50, q=10;
    change (::p, q);
    cout<<p<<"####"<<q<<endl;
    change(p);
    cout<<p<<"####"<<q<<endl;
    change(q, 10);
    cout<<::p<<"####"<<q<<endl;
}
```

- (c) Write a program in C++ to calculate the sum of all numbers in an array of size 10. 3

- (d) What is the difference between = and == operator ? Give an example in support of your answer. 2

- 5 (a) Define a class ISL with the following specifications : 3

Private Members:

Match_index Numeric

Venue String

Date String

Team1 String

Team2 String

Public Members:

“ A constructor that initializes all numeric members with 0 and all strings with “ABC”

“ Accept()_that accepts the entire data

“ Display()_that displays the entire data



- (b) Consider the following class definition and answer the questions that follow : 3

```
Class Toys
{
    char toy_type[10];
protected:
    float price;
    void cal_price(float);
public:
    Toys ();
    char choice;
    void toyinput ();
    void toyshow ();
};
class MyToys : protected Toys
{
    char mtoy_name[10];
    float weight;
protected:
    int no_wheels;
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 MyToys.
- (c) Write a program to find the maximum of all numbers in an integer array of size 15. 3



(d) Predict the output of the following program :

2

```
#include<iostream.h>
#include<ctype.h>
#include<stdio.h>
voidmain()
{
    charText[ ]="#GO2D";
    for (int i=0; Text[i]!='\0';i++)
    {
        if(!isalpha(Text[i]))
            Text[i]='*';
        else
            Text[i]=Text[i+1];
    }
    puts(Text);
}
```

6 (a) Declare a structure ADDRESS having HouseNo(int), Locality(string), Street (string) and City(string) as its members. Thereafter create another structure ADMISSION having the following members :

Adm_No of type integer
Name of type string
Category of type string
S_Address an instance of ADDRESS

Write a C++ statement to accept the value of Locality from the user.

(b) Give a C++ statement to do the following :

2

- (i) Create an integer pointer ptr.
- (ii) Make ptr hold the address of integer char variable var.



- (c) Assuming the class HEALTH_STATION defined below, write a user defined function to read the objects of HEALTH STATION from the binary file Hospi.dat and display the records of only 'cardiology' department. 3

```
class HEALTH_STATION
{
    int Patient_Id;
    char Patient_Name[13];
    char OPD_Date[10];
    float fees;
    char Dept[20];
public
    void enterdata()
    {
        cin>Patient_Id;
        gets(Patient_name);
        gets(OPD_Date);
        cin>>fees;
        gets(Dept);
    }
    void showdata()
    {
        Cout<<Patient_Id<<Patient_Name<<OPD_Date<<fee<<Dept;
    }
    char[] getdept()
    {
        return Dept;
    }
};
```

- (d) Explain the two methods to open a data file in C++. 3
- (e) Which statement is used to create an alias of a datatype ? 1

