Code: A-C337116-M	**I Semester Exam – 2022-23**	3 x 170
Std.: XI	Sub: COMPUTER SCIENCE - I	Marks: 50
Date: 18/11/2022	Roll No.: _____	Time: 3 Hrs.

Q. 1 A) Select the most appropriate option and rewrite the following statements. **[4M]**

1] To read a value in an algorithm statement used?
a) Input b) Read c) Get d) All of these

2] To represent Integer value in C++, _____ keyword is used.
a) int b) float c) integer d) None of these

3] Which of the following is used to terminate a C++ statement?
a); b) } c)] d) All of these

4] In C++ Program structure, first line include.
a) void main () b) header file c) clrscr() d) any C++ statement

B) Attempt any 2 of the following. **[6M]**

Identify and mention the errors in the following codes, and write the correct form.

1]
```
#include<iostream>
#include<conio.h;
void main(

clrscr{ };
cout<<"\nhello world";
}
```

2]
```
#include
#include<conio.h>
void main();
{
    int a;
    cout"\n enter an integer value ";
    cin>>a
}
```

3]
```
#include<iostream.h>
#include<conio.h>
VOID main()
{
    Int a; b;
    cout"\nenter value of a and b";
    cin>>a,b
}
```

Q.2 A) Attempt any TWO of the following. **[6M]**

1] Explain the insertion and extraction operator used in C++.

2] Mention any three basic data types used in C++? Explain each with its size and example.

3] Write Program structure in C++.
Also write a program in C++ to print statement to give following output.
Hello World !
Welcome to C++

P.T.O

B) Attempt any ONE of the following. **[4M]**

1] What is an operator? Explain Arithmetic operators used in C++.

2] Write a C++ statement for the following: (1M each)

(i) d= b^2-4ac

(ii) p=2(l+w)

(iii) d=a^2+2ab+b^2

(iv) E=mc^2

Q. 3 A) Attempt any TWO of the following. **[6M]**

1] Explain the difference between / and % operator used in C++ with examples.

2] Mention any three features of Algorithm.

3] What is char set in C++? Explain with Example.

B) Attempt any ONE of the following. **[4M]**

1] What is Unary operator? Explain pre and post increment operator with an Example

2] Mention and explain any 4 symbols used in flowchart.

Q. 4 A) Attempt any TWO of the following. **[6M]**

1] What will be the output after evaluating the following code?

```
void main()
{
int b=2, c= 3, d;
d = b + c - 5 * b % c;
cout<<d;
}
```

2] Assume int n = 4, a = 1, t = 3, d; what will be the value of d after evaluating the following expression?

d = n*a + 2 + t;

3] Differentiate between '=' and '==' operators with examples.

B) Attempt any ONE of the following. **[4M]**

a] What will be the value of variables r1, r2, m1 and m2, if int a=5,b=6;

1) r1=++a + b--;

2] r2=a++ + --b;

3) m1=++a*7;

4) m2=a++ * 7;

b] Write an algorithm and draw a flowchart to add two integer numbers.

Q.5. Attempt any TWO of the following. **[10M]**

1] Write a Program in C++ to read two integer values from the user and store it in variable say 'a' and 'b'. The program must swap the values stored in these variables **without** using third variable. The program must also print values **before and after** swapping with a suitable message.

2] Draw a flowchart to read marks obtained by a student in 3 subjects. Calculate and print total marks and percentage scored by a student in 3 subjects.

3] Write a Program in C++ to read temperature in Fahrenheit from the user. The program must convert and print the temperature to Celsius. **[Note: F=C *9/5 +32]**

OR

1] Write a program in C++ to read a three-digit number from the user. The program must calculate and print sum of all digits present in that number.

2] Write a program in C++ to read radius of a circle from the user. The program must calculate and print area and circumference of circle.

3] Write an algorithm to find and print sum and average of three integer values.