Code: A-C 730114 - A	**I SEMESTER EXAM. - 2023-24**	2 x 230
Std.: XI	Sub: COMPUTER SCIENCE - I	Marks: 50
Date: 04/11/23	Roll No.: _____	Time: 3 hrs.

Q1. A. Select the most appropriate option and rewrite the following statements. 4

1) Which of the following is used to terminate a C++ statement?
   a) ; b) (c)] d) :
2) Which of the following is an arithmetic operator in algorithm?
   a) + b) – c) = d) Both a) and b)
3) In C++, main() is _____.
   a) Keyword b) Identifier c) Function d) data type
4) When an algorithm is written using a programming language, it becomes a _____
   a) Program b) Flowchart c) Syntax d) All of these

Q1. B. Attempt any 2 of the following. 6

1) What will be the value of variables r, m1 and m2, if int a=5,b=6;
   a) r=++a+b--;
   b) m1=++a * 7;
   c) m2=a++*7;
2) Define the following
   a) Operand b) Variable c) Binary Operator
3) What is keyword? Write any 4 valid keyword used in C++

Q2. A. Attempt any TWO of the following. 6

1) Write the proper sequence of the following program:

```
1. #include<iostream.h>
2. cin>>a>>b;
3. int a,b,t;
4. cout<<" Enter the values";
5. t=a; a=b;b=t;
6. void main()
7. {
8. cout<<" Entered values of :"<<a <<""<<b;
9. }
```

2) State whether the following statements are true or false.
   a) A unary operator works on one operand.
   b) / and % operators performs division.
   c) [ ] can be used in C++ arithmetic statement.
3) Identify the errors in the following codes, and write the correct form.

```
#include<iostream.h
#include<conio.h;
void main(
{
    clrscr{ };
    cout<"\nhello world";
}
```

P.T.O

Q2. B. Attempt any ONE of the following. **4**

1) Write the rules for naming of a variable in C++.
2) What are the basic data types used in C++? Explain each with example.

Q3. A. Attempt any TWO of the following. **6**

1) Explain the difference between / and % operator used in C++.
2) Explain Program structure in C++.
3) Write a C++ statement for the following:

   a) $e=b^2-4ac/2a$

   b) a=l/2(b1+b2)h

   c) p=2(1+w)

Q3. B. Attempt any ONE of the following. **4**

1) Mention all symbols used in flowchart and write the purpose to use
2) Write an Algorithm to enter three digit-based number and print sum of all digits present in that number

Q4. A. Attempt any TWO of the following. **6**

1) Mention any two header files used in C++ along with its significance
2) Define: Operator Associativity. Explain it with an example.
3) Draw a Flowchart to read marks of a student in three subjects. The flowchart must calculate and print the total marks and the percentage obtained by the student.

Q4. B. Attempt any ONE of the following. **4**

1) What is Unary operator? Explain pre and post increment operator in C++ with an Example.
2) Write the characteristics of an Algorithm.

Q5. Attempt any TWO of the following. **10**

1) Write a program in C++ to read the radius of a circle from the user. The program must calculate and print the area and circumference of the circle.
2) Write a Program in C++ to read two integer values from the user and store it in variables say 'a' and 'b'. The program must swap the values stored in these variables. The program must also print values before and after swapping with a suitable message.
3) Write a program in C++ to read three integer values from the user. The program must find and print the sum and average of three integer values.