Code: A-C223115-M

I SEMESTER EXAM - 2024-25

2 x 205

Std.: XI | Sub: Computer Science- I | Marks: 50

Date: 25/10/2024 | Roll No.: _____ | Time: 3 hrs

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

1) In flowchart. Diamond shape box is used for _____.
   a) Decision making b) Specific purpose c) Process
   d) None of these
2) If int a=8, b=3, c=5, r;
   What will be the value of variable after the execution of the following statement?
   r= 2* b + 3 * (a-c);
   a) 45 b) 15 c) error d) None of these
3) Which of the following is an insertion Operator in C++?
   a) >> b) << c) < d) >
4) Which of the following is used to terminate a C++ statement?
   a) ; b) (c)] d) :

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

Identify the errors in the following codes and write the correct form

1)
```
void main();
Int a:
{
Cout"\enter an integer value";
Cin>>a;
}
```

2)
```
#include<iostream.h>
#include<conio.h>;
voidmain(
{
Clrscr{};
cout<<"\n hello world"
}
```

3)
```
#include<iostream.h
#include<conio.h>
VOID main()
Inta;
cout"\n enter value of a";
cin>>a
}
```

Q2. A) Attempt any TWO of the following. [6M]

1) Explain the insertion and extraction operator used in C++.
2) What is Operator Precedence? Explain the concept with an Example.
3) State whether the following statements are true or false
   a) % operator performs division and gives the answer as quotient.
   b) The statement a=b stores the value of variable b in variable a.
   c) Operators and operand both are different.

P.T.O

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

1) Write C++ Program structure.
Also write a program in C++ to print statement to give following output.

Welcome to C++ programming
Hello World

2) Write a C++ statement for the following: (1M each)
   i) $d=b^2-4ac$
   ii) $p=2(l+w)$
   ii) $d=a^2+2ab+b^2$
   iv) $sum = u^3 + t^3 + h^3$

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

1) Mention any 3 basic data types used in C++ along with size in bytes they occupy in memory.
2) Explain declaration and initialization of a variable with example.
3) What is an operator? Explain Arithmetic operators used in C++.

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

1) Mention and explain any 4 symbols used in flowchart.
2) Write an Algorithm to read marks of a student in three subjects. The algorithm must calculate and print the total marks and percentage obtained by the student in three subjects.

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

1) Mention any two header files used in C++ along with its significance.
2) Explain the difference between / and % operator used in C++ with examples.
3) Explain any two escape sequences.

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

1) What will be the value of variables rl, r2, ml and m2, if int a=5, b=6;
   a) r1=++a + b--;
   b) r2=a++ + -b;
   c) ml=++a * 7;
   d) m2=a++ * 7;
2) Draw a flowchart to read temperature in Fahrenheit from the user. The program must convert and print the temperature to Celsius. **[Note: F=C *9/5 +32]**

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 'n1' and 'n2'. 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) 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.
3) Write an Algorithm and draw a flowchart to read three integer values from the user. The program must find and print sum and average of these three integer values.