

XIth Std. Question Bank Paper-1 -2022-23

Theory:

- Q1: Explain Program structure in C++.
- Q2. Explain the insertion and extraction operator used in C++.
- Q3. What is char set in C++? Explain with Example.
- Q4. Explain declaration and initialization of a variable with example.
- Q5. Write the rules for naming of variable.
- Q6. What is keyword? Write any 4 valid keyword used in C++.
- Q7. What is constant? Explain with Example.
- Q8. Define the following:
- a) Operand b) Variable c) Binary Operator d) Tokens e) Compiler
- Q9. What are the basic data types used in C++? Explain each with example.
- Q10. What is an operator? Explain Arithmetic operators used in C++.
- Q12. What is Unary operator? Explain pre and post increment operator with an Example
- Q13. Mention any two header files used in C++ along with its significance?
- Q14. Explain Assignment operator used in C++ with an example.
- Q15. Explain the difference between / and % operator used in C++.
- Q16. What is Operator Precedence? Explain the concept with an Example.
- Q17. Define: Operator Associativity. Explain it with an example.
- Q18. Write a C++ statement for the following:
- a) $d = b^2 - 4ac$
- b) $p = 2(l + w)$
- c) $a = 1/2(b_1 + b_2)h$
- d) $d = a^2 + 2ab + b^2$
- e) $e = b^2 - 4ac / 2a$
- f) $c = (a + b)^2$

State whether the following statements are true or false

- a) C++ is not a case sensitive language.
- b) % Operator cannot be used on float in C++.
- c) Operators and Operand both are different.
- d) Int is a keyword.
- e) [] can be used in C++ arithmetic statement.
- f) A Space can be used in a variable name.
- g) The statement a=b stores the value of variable b in variable a.
- h) = is an assignment operator.
- i) - operator can be used to change the sign of a value.
- j) / and % operators performs division.
- k) % operator performs division and gives the answer as quotient.
- l) A binary operator works on two operands.
- m) ++ is a binary operator.
- n) A unary operator works on one operand.

Output questions:

Assume the declarations: `int a=8, b=3, c=-5, d, e, r;`

- a) What will be the value of variables `d` and `e` after the execution of the following statements?

```
d = (a*c)%b;
```

```
e = a*(c%b);
```

- b) What will be the value of variable `r` after the execution of the following statement?

```
r = 2*b+3*(a-c);
```

- c) Consider the following code and find the value of variable `r`?

```
int a=5, b = 2;
```

```
float c=1.0;
```

```
r = b / (c * a);
```

- d) What will be the value of variables `r`, `m1` and `m2`, if `int a=5,b=6;`

```
1) r=++a + b--;
```

```
2) m1=++a * 7;
```

```
3) m2=a++ * 7;
```

- e) `void main()`

```
{
```

```
    int x=8;
```

```
    cout<<x++;
```

```
}
```

- f) `void main()`

```
{
```

```
    int b =2, c= 3, d;
```

```
    d = b + c - 5 * b % c;
```

```
    cout<<d;
```

```
}
```

- g) 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 + 3 / 2 * a + 2 + t;
```

h) Assume $n = 4$, $a = 1$, $t = 3$, d ; what will be the value of d after evaluating the following expression?

$$d = n * a / ((2 + 3) / 2 * a) + 2 + t;$$

i) What will be the output of following code?

```
int n1=50, n2=4, q, r;
```

```
q = n1/n2;
```

```
r=n1-(q*n2)
```

```
cout<<"The quotient and remainder are : "<<q<<" "<r;
```

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

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

```
2) #include<iostream.h>
    #include<conio.h>
    VOID main()
    {
        Int a;
        cout"\nenter value of a ";
        cin>>a
```

```
3) #include<iostream.h>
    #include<conio.h>
    Void main()
    {
        float a=1.2, b
        a + 2.2 = b
        Cout<<a
    }
```

```
4) void main()
    {

        cout"\n enter an integer value ";
        cin>>a
    }
```

Program based on: 1. Sequence logic based:

a) 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. The program must also print values before and after swapping with a suitable message.

b) 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..

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

d) 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.

e) 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.

f) Write a program in C++ to read three integer values from the user. The program must find and print sum and average of three integer values.

g) Write a program in C++ to read Principle amount (p), Rate of interest (r) and Time period (n) from the user. The program must find and print with a suitable message the simple interest [Note: $si=prn/100$]

h) Write a program in C++ to read marks of a student in 3 subjects. The program must find and print the total marks and percentage of a student in 3 subjects.

Select the most appropriate option and rewrite the following statements.

1. In C++, main() is _____.
a) Keyword b) Identifier c) Function d) data type
2. To represent Integer value in C++, _____ keyword is used.
a) int b) float c) integer d) None of these
3. To represent real value in C++. _____ data type is used.
a) float b) int c) long d) char
4. When an algorithm is written using a programming language, it becomes a _____.
a) Program b) Flowchart c) Syntax d) All of these
5. In flowchart, Diamond shape box is used for _____.
a) Decision making b) Specific purpose c) Process d) None of these
6. Which of the following is an insertion Operator in C++?
a) >> b) << c) > d) <
7. Which of the following rules is invalid to form a variable name?
a) It always starts with an alphabet b) it should not be keyword
c) Space is not allowed d) Variable names are case sensitive
8. % operator cannot be used with _____ data type.
a) int b) float c) char d) All of these
9. If a=8, b=3, c=-5, r; What will be the value of variable r after the execution of the following statement? $r = 2*b + 3*(a-c);$
a) 45 b) 15 c) Error d) None of these
10. In flowchart, can we combine Input and Output statement in one statement?
a) No b) Yes c) Depends on program d) None of these
11. Predefined word is known as _____.
a) Compiler b) variables c) Keyword d) All of these
12. What is this operator >> called as _____.
a) Insertion Operator b) Extraction Operator
c) Relational operator d) increment operaor
13. Which of the following is used to terminate a C++ statement?
a) ; b) (c)] d) :

14. char is a data type that can store ___byte value.
a) 1 b) 2 c) 4 d) 8
15. In C++ Program structure, first line include..
a) void main() b) header file c) any c++ statement d) clrscr()
16. Find the proper sequence of the following program. **(3M)**
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.}
- a) 1,6,8,2,3,4,5,7,9 b) 1,6,7,3,4,2,5,8,9
c) 1, 6, 7,3,2,4,5,8,9 d) None of these
17. Which data type is used to store ALPHABET based value ?
a) float b) int c) char d) None of these
18. What is Pseudo-Code/programming sequence?
a) Process, Output b) Input, Process, Output
c) Conditional, Process, Output d) None of these
19. Which of the following data type uses 2 bytes in memory to store data?
a) int b) long c) char d) float

NOTE: *Kindly refer previous Question Bank along with this Question Bank.*