KERALA STATE RUTRONIX
C++ / Java
(DCA, DCA-FT)

Time : 2 hours　　　　　　　　　　　　　　　　**Maximum Marks : 100**

Note: Write the answers for Questions from 1 to 30 in the MCQ answer sheet

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Part - I   Choose the most appropriate answer　　　　　　**(10 X 1 Mark = 10 Marks)**

1) A function name always ends with ……………

   a) semicolon　　　　b) parenthesis　　　　c) pair of braces　　　d) colon

2) An array element is accessed using ……………

   a) a first in first out approach　b) the dot operator　c) a member name　　d) an index number

3) A …………… is a special method used to initialize the instance variable of a class.

   a) member function　　b) destructor　　　c) constructor　　　d) structure

4) An identifier refers to the name used to represent ……………

   a) variables　　　　b) constants　　　　c) functions　　　　d) All of these

5) Which of the following if any, are valid names for variables?

   a) class　　　　　　b) friend　　　　　c) #index　　　　　d) None of these

6) The manipulator **<<endl** is equivalent to ……………

   a) '\b'　　　　　　b) '\t'　　　　　　c) '\n'　　　　　　d) '\0'

7) Variables that are both alive and active throughout the entire program are known as ……………

   a) private　　　　　b) local　　　　　c) global　　　　　d) automatic

8) The expression 34 % 8 evaluates to ……………

   a) 0　　　　　　　b) 2　　　　　　　c) 1　　　　　　　d) 4

9) Wrapping up of data and functions into a single unit is called ……………

   a) abstraction　　　b) data hiding　　　c) polymorphism　　　d) encapsulation

10) What will be the value of 'a'?

    int a=3, b=4;
     a=b++; a=a-2;

    a) 1　　　　　　　b) 2　　　　　　　c) 3　　　　　　　d) 6

Part - II   Fill in the Blanks　　　　　　　　　　　　　　　　**(10 X 1 Mark = 10 Marks)**

11) …………… keyword refers to the current object.

12) OOP stands for ……………

13) Exception handling is used to handle …………… error.

14) …………… holds both data and functions.

15) A class can inherit properties from more than one class which is known as …………… inheritance.

16) Single quotes are used with constants of the …………… type.

17) …………… statement is used to exit from a loop.

18) Input provided at the time of execution is called ……………

19) The Boolean operation **AND** is performed using the operator ……………

20) …………… are operators used to format data display.

Part - III State whether True or False　　　　　　　　　　**(10 X 1 Mark = 10 Marks)**

21) Declarations can appear any where in the body of C++/JAVA methods.

22) It is possible to define multiple catch blocks in try blocks.

23) Destructors are invoked automatically when the objects are created.

24) A class cannot contain objects of other classes.

25) Inheritance provides reusability of code.

26) Call by Value function makes the copy of the variable passed.

27) Default return type of all functions is *void*.

28) The static member variables must be defined outside the class.

29) In a class, members are public by default.

30) The **goto** statement cannot be used to transfer the control out of a nested loop.

Part - IV State errors clearly (if any) and rewrite the statement.   (5 X 2 Marks = 10 Marks)

31) int public =500;

32) for (i=1;int i<10;i++) cout<<i<<"\n";

33) int a+ =1;

34) if (q≠p) p=q;

35) int m = 15.25+-5.0;

(Part V, Part VI എന്നിവയുടെ ഉത്തരങ്ങൾ മലയാളത്തിലും എഴുതാം)

Part - V Answer the following (Any Eight)   (8 X 5 Marks = 40 Marks)

36) Difference between *while* loop and *do….. while* loop with syntax and examples.

37) Explain any **five** string library functions.

38) Write a program to check whether a number is positive or negative or zero.

39) What is meant by a variable? Give the syntax for declaring and initializing variable.

40) Give the output :
   a) 9-(12/(3+3)*2)-1
   b) 9-((12/3)+3*2)-1

41) Write the equivalent C++/Java code to print the value of Z.

where $Z = \sqrt[3]{27} + 2a\sqrt{5x - y^{20}}$

42) Write the C++/Java code equivalent for the following statement.

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If weight is less than 50 height is greater than 170 print "under-
weight" and count is incremented by one.
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43) Explain Jump statements.

44) Explain various data types.

45) Write a program to calculate and print the area of a circle (A), given the radius(r). ($A = \pi r^2$)

46) Explain the difference between PREFIX and POSTFIX decrement operators with an example.

Part - VI Explain the following (Any Two)   (2 X 10 Marks = 20 Marks)

47) Define Inheritance and explain various types of Inheritance.

48) Explain operator overloading with an example.

49) What are arrays? Explain the different types of arrays with syntax and examples.

50) Write a menu driven program in C++/Java to find the sum, difference, product and quotient of two numbers entered by the user.

   The menu options have to follow the given format below.

   1. Sum

   2. Difference

   3. Product

   4. Quotient