

## Model Public Exam Question Paper

CLASS : 11

SUB : COMPUTER SCIENCE

MARKS : 70

TIME : 3.00 hrs

## I. Choose the best answer:

15x=15

1. Which concept is used in fifth generation computers?  
A) Computing      B) Artificial Intelligence      C) Calculating      D) Super computing
2. How many characters can be represented by ASCII code?  
A) 16                      B) 256                      C) 1024                      D) 128
3. Which is a combination of XNOR gate followed by an inverter?  
A) NAND                      B) AND                      C) XOR                      D) OR
4. Which of the following is a multi-user Operating system?  
A) MSDOS                      B) UNIX                      C) DOS                      D) OS
5. The easiest way to start an application is to use its icon on the  
A) Tool bar                      B) Start menu                      C) Desktop                      D) Task bar
6. Which operator requires two operands  
A)Unary                      B) Binary                      C) Ternary                      D) Relational
7. How many fundamental data types in C++?  
A) 2                      B) 3                      C) 4                      D) 5
8. The different statements in for loop which is separated by  
A)Comma                      B) Semicolons                      C) Colon                      D) Spaces
9. Which function is used to check whether a given character is a digit or not?  
A) isalpha()                      B) isdigit()                      C) islower()                      D) isalnum()
10. In C++, array subscript value is enclosed within which symbol?  
A) [ ]                      B) { }                      C) ( )                      D) < >
11. Structure definition is terminated by  
A) :                      B) }                      C) ;                      D) ::
12. Which of the following is a user defined data type?  
A) class                      B) float                      C) int                      D) object
13. The member function defined within the class behaves like  
A) inline functions                      B) Non inline function  
C) Outline function                      D) Data function
14. Which is the default access specifier?  
A) private                      B) public                      C) protected                      D) static
15. When a derived class inherits only from one base class, it is known as  
A) Multiple inheritance                      B) Hybrid inheritance  
C) Single inheritance                      D) Multilevel inheritance

**II. Answer the any 6 in the following questions:**

**6x2=12**

**Q.No : 23 is compulsory**

16. What is the function of an ALU?
17. Draw the truth table for XOR gate.
18. What is Multi-user operating system?
19. Draw a flowchart for 3case analysis using alternative statements.
20. What is the use of setw( ) format manipulator?
21. Write a while loop that displays numbers 2,4,6,8,.....20.
22. What is the syntax to declare two dimensional array?
23. Identify the function name, class tag and type for the following:  
void add::display( )
24. What is the difference between public and private visibility mode?

**III. Answer the any 6 in the following questions:**

**6x3=18**

**Q.No : 29 is compulsory**

25. What is radix of a number system? Give example.
26. Differentiate PROM and EPROM.
27. Write a note on the elements of a window.
28. King Vikramaditya has two magic swords. With one, he can cut off 19 heads of a dragon, but after that the dragon grows 13 heads. With the other sword, he can cut off 7 heads, but 22 new heads grow. If all heads are cut off, the dragon dies. If the dragon has originally 1000 heads, can it ever die?  
(Hint:The number of heads mod 3 is invariant.)
29. Write a C++ program to print multiplication table of a given number.
30. What is Built in functions?
31. What do you mean by modularization and software reuse?
32. Write with example how will you dynamically initialize objects?
33. What are ethical issues? Name some.

**IV. Answer the following:**

**5x5=25**

34. Explain the following:  
a. Retinal scanner      b. Keyer      c. Laser printer **(OR)**

Explain the characteristics of a microprocessor.

35. Explain the process management algorithms in operating system. **(OR)**

Assume an  $8 \times 8$  chessboard with the usual coloring. "Recoloring" operation changes the color of all squares of a row or a column. You can recolor re-peatedly. The goal is to attain just one black square. Show that you cannot achieve the goal. (Hint: If a row or column has b black squares, it changes by  $(|8 - b) - b|$ ).

36. Explain the following:

- a. Conditional operator                      b. Data type Modifiers **(OR)**

Explain Nested – if statements.

37. Explain scope of a variable with example. **(OR)**

Write a C++ program to find the difference between two matrix.

38. Explain : a. Global object    b. Local object **(OR)**

Read carefully the following program and fill the table:

```
#include <iostream>
using namespace std;
class Shape
{ private:
int count;
protected:
int width, height;
public:
void setWidth(int w)
{ width = w; }
void setHeight(int h)
{ height = h; } };
class Rectangle: public Shape
{
public:
int getArea()
{
return (width * height);
}
};
int main()
{
Rectangle Rect;
Rect.setWidth(5);
Rect.setHeight(7);
// Print the area of the object.
cout<< "Total area: "<<Rect.getArea() <<endl;
return 0;
}
```

Member of class	Visibility modes –		
	Public for acquiring the properties of the base class		
	Private	Public	Protected
Shape(base class)			
Rectangle(derived class)			

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