

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086  
(For candidates admitted during the academic year 2015 – 2016 & thereafter)

SUBJECT CODE: 15BI/PC/CP14

M. Sc. DEGREE EXAMINATION, NOVEMBER 2016

BIOINFORMATICS  
FIRST SEMESTER

COURSE : CORE  
PAPER : PROGRAMMING IN C++  
TIME : 3 HOURS

MAX. MARKS: 100

SECTION – A

ANSWER ALL QUESTIONS.

(30 x 1=30)

1. An assembly language consists of ----- type of instructions.
2. Assembler is a ----- dependent language and it is a translator for ----- language.
3. In generalized syntax the symbol < > indicates-----.
4. Logical error is also called as -----.
5. The C++ programming language is very popular because it is -----.
6. -----is an Object Oriented Programming concept that binds together the data and functions that manipulate the data, and that keeps both safe from outside interference and misuse.
7. -----is the smallest element of a C++ program that is meaningful to the compiler.
8. A sequence of characters used to denote one of the following: Object or variable name. Class, structure, or union is known as -----.
9. In “Pass by-----“method of passing parameters to a function the called function can alter the actual parameter.
10. Action is exactly performed when the prototype of the function is mentioned as -----.
11. The starting index of an array is always\_\_\_\_\_.
12. The correct method of declaration for a string of 100 characters is -----.
13. ----- is known as class type variable.
14. -----of a class has its definition or its prototype within the **class** definition like any other variable.
15. A function which is not a member of a class is known as -----.
16. Taking the ownership of another class is known as -----
17. -----keyword is used to define late binding.
18. In ----- concept the compiler checks the type of reference in the object and not the type of object.
19. ----- is the correct class of the object cin.
20. ----- is a manipulator used to feed a new line.
21. The default access specifier is -----
22. class A : public X, public Y {} is a----- type of inheritance.
23. ----- keyword is used to overload an operator.
24. The operator is overloaded for object cout is -----.
25. To perform stream I/O with disk files in C++, one should use classes derived from -----.
26. In ‘ifstream’ class creation, then the default mode of the file is \_\_\_\_\_.
27. ----- moves the get pointer to a specific location in the file.
28. The mode deletes the contents of the file before opening is known as -----
29. A variable which holds an address of a memory location is known as -----.
30. A reference variable is an ----- name for a previously defined variable.

**SECTION – B**

**ANSWER ANY TWO QUESTIONS. EACH ANSWER SHOULD NOT EXCEED 500 WORDS.**

**(2x 10 = 20)**

31. Write a short note on C++ characteristics and object oriented programming.
32. Explain various C++ data types with general form and example.
33. What are friend functions? Explain the characteristics with a suitable example.
34. Write a note on the purpose, basic syntax, visibility mode and the types of inheritance.

**SECTION – C**

**ANSWER ANY TWO QUESTIONS. EACH ANSWER SHOULD NOT EXCEED 500 WORDS.**

**(2x 25 = 50)**

35. (i) Write a C++ program to find the prime number between given intervals.  
(ii) Write a C++ Program to Check Armstrong Number Using User-defined Function.
36. Perform a C++ program to check the Fibonacci series of a number.
  - (i) Describe about “Looping Structure” and write a program of “multiplication table for a given number” using while, do-while and for loop.
  - (ii) Write a C++ program to create a class called STRING and implement the following operations. Display the results after every operation by overloading the operator.  
STRING s1 = “HELLO”, STRING s2 = “WORLD”, STRING s3 = s1 + s2 ; (Use copy constructor).
37. (i) What is the output of the following and explain the result. (5 marks)

```
#include <iostream>
int main()
{
    cout << "Size of char : " << sizeof(char) << endl;
    cout << "Size of int : " << sizeof(int) << endl;
    cout << "Size of short int : " << sizeof(short int) << endl;
    cout << "Size of long int : " << sizeof(long int) << endl;
    cout << "Size of float : " << sizeof(float) << endl;
    cout << "Size of double : " << sizeof(double) << endl;
    cout << "Size of wchar_t : " << sizeof(wchar_t) << endl;
    return 0;
}
```

- (ii) Write a C++ program to open a file in C++ “t1.txt” and write “object oriented programming.”, “test program.” into the file. Read the file and display the contents. (15 marks)

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