



Reg. No. :

Name :

Third Semester B.Tech. Degree Examination, November 2013
(2008 Scheme)
08.304 : PROGRAMMING IN C++ AND DATA STRUCTURES (TA)

Time : 3 Hours

Max. Marks : 100

PART – A



Answer **all** questions. **Each** question carries **4** marks.

1. Write a program that reads the users age and then prints “you are a child”. If the age < 18. “ You are an adult”. If $18 \leq \text{age} < 65$ and “You are a senior citizen” If $\text{age} \geq 65$.
2. How does an enum statement differ from typedef statement ?
3. Explain the difference between the following two uses of the indirection operator
 $* , \text{int}^* q = p; n = *p;$
4. What is the difference between class template and template class ?
5. Write a function power () to raise a number ‘m’ to a power ‘n’.
6. Explain friend function using example.
7. Write a program to overload unary increment operator.
8. Write an algorithm REVERSEQ that will reverse all elements in a queue.
9. Explain the terms throw-catch with example.
10. Briefly explain the basic operations that can be performed on a linked list.



PART – B

Answer **any two** questions from **each** Module. **Each** question carries **10** marks.

Module – I

11. Write a program to find out product of two matrices.
12. Write a program that counts and prints the number of lines, words and letter frequencies (i.e. number of times each alphabet is repeated) in its input.
13. Write a function that is passed an array of n pointers to floats and returns a newly created array that contains those n float values.

Module – II

14. Explain multilevel inheritance using example.
15. Explain how read () and write () functions can be used to perform file operation, using example.
16. Write a program that returns the size in bytes of a program entered on command line : C > file size program.ext.

Module – III

17. Create an array of pointers to strings representing the days of the week. Provide functions to sort strings into alphabetical order. Sort the pointers to the strings, not the actual strings. Write a program to implement this function.
18. Write a program to sort n numbers using merge sort.
19. Write a program that performs the basic operations on a double linked list.