

APRIL 2015

50410/SAE3A/
SAZ3A

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. Define token. What are the tokens used in C++?
2. State the use of void in C++.
3. What are inline functions? How can an outside function be made in line?
4. Define constructors. List some of the special characteristics of constructors.
5. Give a function to overload a unary minus operator using friend function.
6. Differentiate between list and array.
7. List the various modes of opening a file.
8. Write the postfix and prefix forms for the expression $A + B * (C - D) | (P - R)$.

II Bsc (cs) Programming in c++ & Data structures

9. Define queue. How do you test for an empty queue?
10. What is the need for hashing?
11. Define an expression tree.
12. What is type conversion?

SECTION B — (5 × 5 = 25 marks)

Answer any FIVE questions.

13. Draw the expression tree for the expression $(a + b * c) + ((d * e + f) * g)$.
14. Explain the adjacency matrix representation for a graph.
15. Write a C++ program to swap two numbers in a function using call by reference technique.
16. Write about the data members and member functions that exist in a class.
17. Explain the error handling during file operations.
18. Write a routine to explain the enqueue operation of a queue.
19. How is an infix expression converted to postfix expression?

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Explain the Dijkstra's Algorithm with an example.
21. Explain the insert and delete operation for a singly linked list.
22. Write notes on ;
 - (a) File pointers.
 - (b) EOF.
23. Explain how stream classes support the console I/O operations.
24. Write a C++ program to add two complex numbers using operator overloading.