

NOVEMBER/DECEMBER 2019

BSC21 — C++ AND DATA STRUCTURES



Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define an Object.
2. How will you declare pointer.
3. What is the use of friend function in C++?
4. What is a destructor?
5. Define inheritance.
6. What is meant by error handling?
7. Define stack.
8. What is use of linked list?
9. What is the use of tree traversal in data structures?
10. Define binary tree.

SECTION B — ($5 \times 5 = 25$ marks)

Answer ALL questions.

11. (a) Discuss about do-while statement with an example.

Or

- (b) Write a C++ program for Factorial computation.

12. (a) Discuss about function prototyping with example.

Or

- (b) Write short notes on inline function.

13. (a) Describe about the Multilevel Inheritance.

Or

- (b) What do you mean by EOF detection? Explain.

14. (a) Discuss about the basic operations on data structures.

Or

- (b) Discuss about singly-linked list in detail.

15. (a) How to insert an element in to a binary search tree? Explain.

Or

- (b) Write an algorithm for Breath-First traversal.

SECTION C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Explain in detail about the basic concepts of OOP.
17. Explain about the types of Constructors with suitable example.
18. How can you work with files in C++? Discuss in detail.
19. Discuss about linked queue operations in detail.
20. Briefly explain about recursive tree traversals in detail.