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Question Paper Code : 11322

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2012.

Third Semester

Electronics and Communication Engineering

EC 2202/147301/EC 33/10144 EC 303/080290009 — DATA STRUCTURES AND OBJECT ORIENTED PROGRAMMING IN C++

(Regulation 2008)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define Object.
2. What is constructor?
3. List out the operators which cannot be overloaded.
4. What does multiple inheritance mean?
5. What are the basic data structures available in C++?
6. Define heap.
7. When the tree is called Complete binary tree?
8. Define ADT.
9. Define Spanning Tree.
10. What is the worst case and best case no. of comparisons in a linear search?

PART B — (5 × 16 = 80 marks)

11. (a) Write a menu-driven program to accept 2 integers and an operator (+, –, *, %, /) and to perform the operation and print the result.

Or

(b) Specify a class called complex to represent complex numbers. Overload +, – and * operators when working on the objects of this class.

12. (a) Define Friend Function. What is polymorphism? Explain multiple inheritance. (16)

Or

(b) What is string? Write a C++ Program to sort the given strings in the alphabetically.

13. (a) Explain the operations of Binary heap.

Or

(b) Write algorithms for insertion and deletion in linked stack.

14. (a) Describe the shortest path identification using dijkstra's algorithm.

Or

(b) What is graph? Explain the depth first search tree.

15. (a) Describe the concept of Bubble Sort & Merge Sort with example. (16)

Or

(b) With example explain the binary search technique. (16)
