Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 51394

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2014.

Third Semester

Electronics and Communication Engineering

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

(Regulation 2008/2010)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. How to create symbolic constants in C++?
2. Define destructors with syntax.
3. List out various forms of inheritance.
4. Write syntax for rethrowing an exception.
5. Convert the given notation from infix to postfix.
6. Define hashing.
7. How to calculate shortest paths in unweighted graph?
8. What is NP completeness?
9. What is K-way merge?
10. Write the template for depth-first search.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain call by reference and return by reference with syntax. (8)

(ii) Brief about manipulation of strings using operators. (8)

Or

(b) (i) Explain with syntax multiple constructors in a class. (8)

(ii) What is Constructor with default Arguments? (8)

12. (a) (i) Derive inheritance for insurance policies. (8)

(ii) Give the structure form of scope rules for public, private and protected access to superclass and subclass members and objects. (8)

Or

(b) (i) Explain polymorphism with an example. (8)

(ii) List and brief different string handling techniques. (8)

13. (a) (i) What is Queue? Explain by comparing with stack. (8)

(ii) Write pseudo code for insertion and deletion from Queue. (8)

Or

(b) (i) What is the need of Linked list? (8)

(ii) Give syntax to insert X in Linked list. (8)

14. (a) Explain binary tree traversal with syntax. (16)

Or

(b) Find the shortest path for a graph with any algorithm. (16)

15. (a) For which sorting divide and conquer technique is used. Write its algorithm with explanation to sort 10 values.

Or

(b) Give short notes of :

(i) Merge sort with suitable example. (8)

(ii) Quick sort with suitable example. (8)
