B.E / B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2014

Electronics and Communication Engineeriong

III Semester

CS9211 Data structures and Object Oriented Programming in C++
(Regulation 2008)

Time: 3 Hours   Answer ALL Questions   Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. What is an object?

2. What is an abstract data type?

3. What is reusability?

4. What is an exception?

5. Define priority queue

6. What is singly linked list?

7. What is a tree?

8. What is bi connectivity?

9. What is sorting

10. What is dynamic programming?

Part – B (5 x 16 = 80 marks)

11(i) Explain the major principles of object oriented programming with illustrations and neat sketches   16

12.a What is application of virtual function? Explain with an example how late binding is achieved using virtual function   16

(OR)

b Discuss in detail about exception handling constructs and write a program to illustrate divide by zero exception   16

13.a Discuss in detail the applications of priority queue with suitable examples   16

(OR)

b Write a routine for insertion and deletion in a queue. Check for necessary conditions   16

14.a Write a function to perform binary search tree. Show the result of inserting 4,3,8,1,9,7,10,2,5 into an empty binary search tree   16

(OR)

b Explain the spanning tree algorithm. Discuss with a suitable example   16

15.a Explain the working of quick sort algorithm with a program and sample data set   16

(OR)

b What is divide and conquer technique? Write a routine and explain how the divide and conquer technique used in merge sort   16