JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- Oct 2017

B.Tech VII/M.Tech I Semester

COURSE CODE: 10M11CI111   MAX. MARKS:25

COURSE NAME: ADVANCED DATA STRUCTURE

COURSE CREDITS: 3   MAX. TIME: One Hour Thirty Minutes

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

1. Describe inverted index data structure for text searching from a collection of documents. Construct inverted index for the following collection. Explain in details Map-Reduce implementation to construct an Inverted Index from a large document collection.
   [2+3+5]

   Doc1: breakthrough drug for schizophrenia
   Doc2: new schizophrenia drug
   Doc3: new approaches for treatment of schizophrenia
   Doc4: new hopes for schizophrenia patients

2. Write short note on Range search tree, K-D tree and Quad tree. Compare them with respect to space partitioning strategy.
   [2+2+2+2]

3. Execute the Round Robin (Tarzan & Chariton) algorithm to find MST using binomial heap and union-find data structure on a graph of your choice with at least 8 vertices and 15 edges.
   [7]