JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -1 EXAMINATION- September 2017
B.Tech (VII)/ M.Tech (I) Semester

MAX. MARKS:15

COURSE CODE: 10M11CI111

COURSE NAME: Advanced Data Structure

MAX. TIME: 1 Hr

COURSE CREDITS: 03

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

MARKS [3 x 5 = 15]

1. Compute the amortized complexity of a binary counter using potential method.

2. Given a set of elements and a query element. How to check the membership of the query element using a bloom filter. Compute the probability of false positive reply.

3. Explain the collision analysis of a cuckoo hashing using bipartite graph.

4. Splay 12, 6, 5, 11, 9, 7, and 10. (construct splay tree by inserting the numbers sequentially)

5. What is binomial heap? Construct a binomial heap for 29 nodes. Explain merging of two binomial heaps.

CT-15, BTMT