

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- Oct 2017

B.Tech (BI) V Semester

COURSE CODE: 10B11CI411

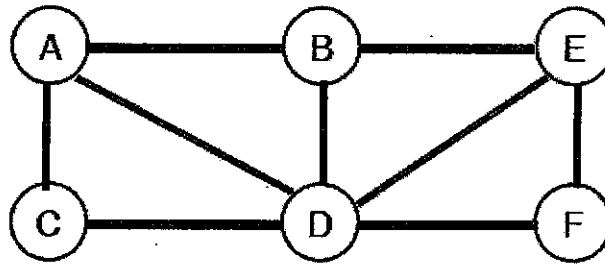
MAX. MARKS:25

COURSE NAME: Fundamentals of Algorithms

COURSE CREDITS: 4

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. Draw a Breadth-First Search Tree and a Depth-First Search Tree beginning at A for the graph above. Is that the only BFS Tree and only DFS Tree rooted at A for this graph? Draw the others if not unique. [4 + 6]

2. Write the properties of red black tree? Construct a red black tree for following numbers: 8, 20, 9, 4, 15, 10, 7, 22, 3, 12 [2 + 4]

3. Write notes about the following, incorporating major technical issues: [3 X 3]

- (a) Skip List
- (b) Collision in hashing
- (c) Linear time sorting