H.T.No. | | | | | | | | | | |

Code No: IT1503 **GEC-R14**

II B. Tech II Semester Regular Examinations, April 2017

ADVANCED DATA STRUCTURES USING C

(Information Technology)

Time: 3 Hours **Max. Marks: 60**

Note: All Questions from **PART-A** are to be answered at one place.
Answer any **FOUR** questions from **PART-B.** All Questions carry equal Marks.

PART-A

6 × 2 = 12M

1. Define Clustering.
2. 2-3 trees are binary trees are not? Justify your answer.
3. What do you mean by the "heapify" process?
4. List various graph traversal techniques.
5. What does Dijkstra's algorithm compute?
6. Compare tries with hash table.

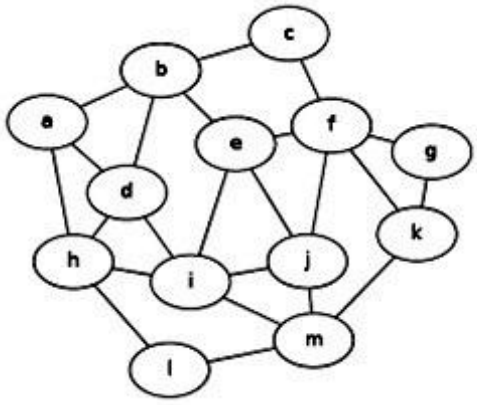
PART-B

4 × 12 = 48M

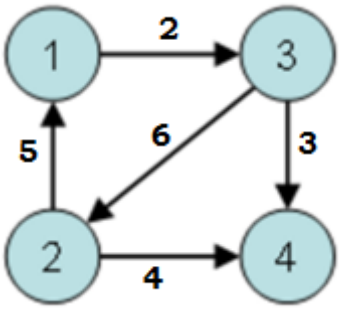
1. a) Discuss about Analysis of closed hashing. (4M)

   b) Illuminate Multiplication Method of Hashing with an Example? (8M)

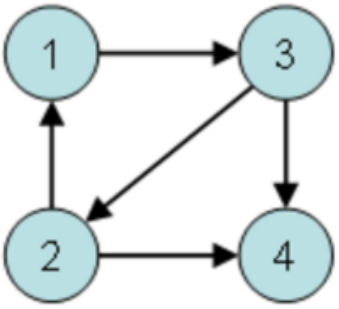
2. Explain various rotations required for rebalancing an AVL tree in "Left of left" and "Right of left" cases with examples. (12M)
3. Write in detail about the "Reheap Up" Operation of binary heap with suitable example. (12M)
4. Apply BFS and DFS algorithms on the following graph. (12M)



5. With necessary diagrams explain Prim's algorithm ? (12M)



6. Apply Warshall's Algorithm for the below Graph? (12M)



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