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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year I Semester Examinations, February/March - 2022
DATA STRUCTURES
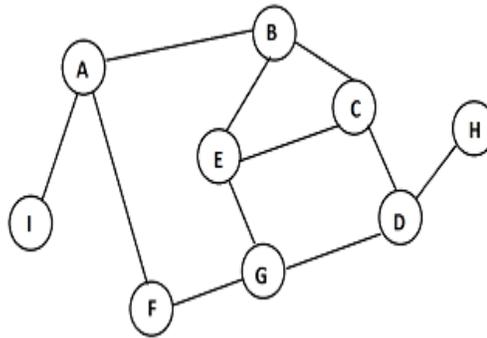**(Common to CE, ME, ECE)**

Time: 3 Hours   **Max. Marks: 75**

Answer any five questions
All questions carry equal marks
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1. Write a program to find the addition of two polynomials using linked list.   [15]

2.a) Explain the operations of Queue with an example.
  b) Write an algorithm to delete an element from queue by using linked representation.[7+8]

3.a) Explain the different types of hash functions with an example.
  b) Explain about quadratic probing and linear probing with example.   [8+7]

4. Insert the following list of elements by using double hashing (size of hash table is 5).
   52, 34, 62, 48, 45, 31, 40, 53, 37, 32   [15]

5. Construct the AVL tree of the list of elements   [15]
   56, 89, 90, 22, 34, 46, 18, 25, 10, 85

6. Write an algorithm to insert and delete an element from Binary Search Tree.   [15]

7. Find the BFS and DFS of the following graph   [15]

8. Consider the following text T and pattern P.
   T = EIUHIWABNQLSZNROBMC
   P = NQLSZN
   Write and apply the Boyer Moore algorithm and also illustrate the intermediate steps.[15]

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