

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY, THENI.

Course/Branch : B.E/ECE	Year / Semester :II/III	Format No.	NAC/TLP-07a.13
Subject Code :EC8393	Subject Name :Fundamentals of Data Structures in C	Rev. No.	02
Unit No :4	Unit Name : Non Linear Data Structures	Date	30.09.2020

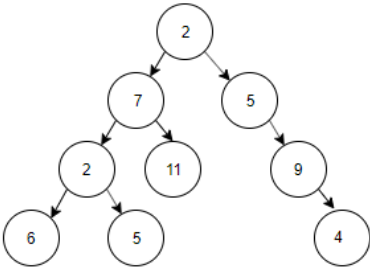
OBJECTIVE TYPE QUESTION BANK

S. No.	Objective Questions (MCQ /True or False / Fill up with Choices)	BTL
1.	How many children does a binary tree have? a) 2 b) any number of children c) 0 or 1 or 2 d) 0 or 1	L2
2.	What is/are the disadvantages of implementing tree using normal arrays? a) difficulty in knowing children nodes of a node b) difficult in finding the parent of a node c) have to know the maximum number of nodes possible before creation of trees d) difficult to implement	L4
3.	What must be the ideal size of array if the height of tree is 'l'? a) 2^l-1 b) l-1 c) l d) 2l	L5
4.	If the tree is not a complete binary tree then what changes can be made for easy access of children of a node in the array? a) every node stores data saying which of its children exist in the array b) no need of any changes continue with 2w and 2w+1, if node is at i c) keep a separate table telling children of a node d) use another array parallel to the array with tree	L1
5.	Advantages of linked list representation of binary trees over arrays? a) dynamic size b) ease of insertion/deletion c) ease in randomly accessing a node d) both dynamic size and ease in insertion/deletion	L3
6.	What may be the psuedo code for finding the size of a tree? a) find_size(root_node->left_node) + 1 + find_size(root_node->right_node) b) find_size(root_node->left_node) + find_size(root_node->right_node) c) find_size(root_node->right_node) - 1 d) find_size(root_node->left_node + 1	L2
7.	What is the code below trying to print? <pre>void print(tree *root,tree *node) { if(root ==null) return 0 if(root->left==node root->right==node print(root->left,node) printf(root->right,node) { print(root->data) } }</pre> a) just printing all nodes b) not a valid logic to do any task c) printing ancestors of a node passed as argument d) printing nodes from leaf node to a node passed as argument	L1

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY, THENI.

Course/Branch : B.E/ECE	Year / Semester :II/III	Format No.	NAC/TLP-07a.13
Subject Code :EC8393	Subject Name :Fundamentals of Data Structures in C	Rev. No.	02
Unit No :4	Unit Name : Non Linear Data Structures	Date	30.09.2020

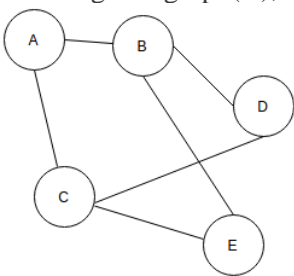
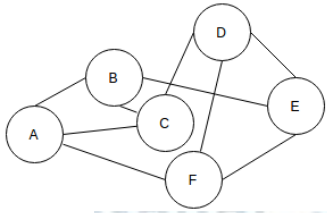
OBJECTIVE TYPE QUESTION BANK

8.	Level order traversal of a tree is formed with the help of a) breadth first search b) depth first search c) dijkstra's algorithm d) prims algorithm	L2
9.	For the tree below, write the level-order traversal.  <pre> graph TD 2((2)) --> 7((7)) 2 --> 5((5)) 7 --> 2_7((2)) 7 --> 11((11)) 2_7 --> 6((6)) 2_7 --> 5_7((5)) 5 --> 9((9)) 9 --> 4((4)) </pre> a) 2, 7, 2, 6, 5, 11, 5, 9, 4 b) 2, 7, 5, 2, 11, 9, 6, 5, 4 c) 2, 5, 11, 6, 7, 4, 9, 5, 2 d) 2, 7, 5, 6, 11, 2, 5, 4, 9	L1
10.	In a binary search tree, which of the following traversals would print the numbers in the ascending order? a) Level-order traversal b) Pre-order traversal c) Post-order traversal d) In-order traversal	L3
11.	Which of the following is false about a binary search tree? a) The left child is always lesser than its parent b) The right child is always greater than its parent c) The left and right sub-trees should also be binary search trees d) In order sequence gives decreasing order of elements	L4
12.	What are the conditions for an optimal binary search tree and what is its advantage? a) The tree should not be modified and you should know how often the keys are accessed, it improves the lookup cost b) You should know the frequency of access of the keys, improves the lookup time c) The tree can be modified and you should know the number of elements in the tree before hand, it improves the deletion time d) The tree should be just modified and improves the lookup time	L5
13.	A binary tree is a rooted tree but not an ordered tree. a) true b) false	L3
14.	Which of the following properties are obeyed by all three tree – traversals? a) Left subtrees are visited before right subtrees b) Right subtrees are visited before left subtrees c) Root node is visited before left subtree d) Root node is visited before right subtree	L4
15.	Which of the following statements for a simple graph is correct? a) Every path is a trail b) Every trail is a path	L2

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY, THENI.

Course/Branch : B.E/ECE	Year / Semester :II/III	Format No.	NAC/TLP-07a.13
Subject Code :EC8393	Subject Name :Fundamentals of Data Structures in C	Rev. No.	02
Unit No :4	Unit Name : Non Linear Data Structures	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

	<p>c) Every trail is a path as well as every path is a trail d) Path and trail have no relation</p>	
16.	<p>For the given graph(G), which of the following statements is true?</p>  <p>a) G is a complete graph b) G is not a connected graph c) The vertex connectivity of the graph is 2 d) The edge connectivity of the graph is 1</p>	L1
17.	<p>What is the number of edges present in a complete graph having n vertices?</p> <p>a) $(n*(n+1))/2$ b) $(n*(n-1))/2$ c) n d) Information given is insufficient</p>	L1
18.	<p>The given Graph is regular.</p>  <p>a) True b) False</p>	L2
19.	<p>Which of the following is true?</p> <p>a) A graph may contain no edges and many vertices b) A graph may contain many edges and no vertices c) A graph may contain no edges and no vertices d) A graph may contain no vertices and many edges</p>	L2
20.	<p>For a given graph G having v vertices and e edges which is connected and has no cycles, which of the following statements is true?</p> <p>a) $v=e$ b) $v = e+1$ c) $v + 1 = e$ d) $v = e-1$</p>	L3
21.	<p>Which of the following ways can be used to represent a graph?</p> <p>a) Adjacency List and Adjacency Matrix b) Incidence Matrix c) Adjacency List, Adjacency Matrix as well as Incidence Matrix d) No way to represent</p>	L3
22.	<p>What would be the DFS traversal of the given Graph?</p>	L2

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY, THENI.

Course/Branch : B.E/ECE	Year / Semester :II/III	Format No.	NAC/TLP-07a.13
Subject Code :EC8393	Subject Name :Fundamentals of Data Structures in C	Rev. No.	02
Unit No :4	Unit Name : Non Linear Data Structures	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

	<p>a) ABCED b) AEDCB c) EDCBA d) ADECB</p>	
23.	<p>What sequence would the BFS traversal of the given graph yield?</p> <p>a) A F D B C E b) C B A F E D c) A B D C E F d) E F D C B A</p>	L4
24.	<p>What is the value of the sum of the minimum in-degree and maximum out-degree of an Directed Acyclic Graph?</p> <p>a) Depends on a Graph b) Will always be zero c) Will always be greater than zero d) May be zero or greater than zero</p>	L5
25.	<p>Adjacency matrix of all graphs are symmetric.</p> <p>a) False b) True</p>	L1
26.	<p>A _____ is an ordered collection of objects.</p> <p>a) Relation b) Function c) Set d) Proposition</p>	L1
27.	<p>The union of the sets {1, 2, 5} and {1, 2, 6} is the set _____</p> <p>a) {1, 2, 6, 1} b) {1, 2, 5, 6} c) {1, 2, 1, 2} d) {1, 5, 6, 3}</p>	L1
28.	<p>The intersection of the sets {1, 2, 5} and {1, 2, 6} is the set _____</p> <p>a) {1, 2} b) {5, 6} c) {2, 5} d) {1, 6}</p>	L3

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY, THENI.

Course/Branch : B.E/ECE	Year / Semester :II/III	Format No.	NAC/TLP-07a.13
Subject Code :EC8393	Subject Name :Fundamentals of Data Structures in C	Rev. No.	02
Unit No :4	Unit Name : Non Linear Data Structures	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

29.	The difference of {1, 2, 3} and {1, 2, 5} is the set _____ a) {1} b) {5} c) {3} d) {2}	L1
30.	Which of the following two sets are disjoint? a) {1, 3, 5} and {1, 3, 6} b) {1, 2, 3} and {1, 2, 3} c) {1, 3, 5} and {2, 3, 4} d) {1, 3, 5} and {2, 4, 6}	L2

