S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Duration: 3 Hours Maximum Marks: 35

Q 1. Write a C program that accepts the vertices and edges of a graph and stores it as an adjacency matrix. Display the adjacency matrix. [15 Marks]

Q 2. Implement a Binary search tree (BST) library (btree.h) with operations – create, insert, preorder. Write a menu driven program that performs the above operations.

[15 Marks]

OR

Q 2. Write a C program for the Implementation of Prim's Minimum spanning tree algorithm.

[15 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Duration: 3 Hours Maximum Marks: 35

Q1. Write a C program for the implementation of Topological sorting. [15 Marks]

Q 2. Write a C program that accepts the vertices and edges of a graph and stores it as an adjacency matrix. Display the adjacency matrix. [15 Marks]

OR

Q 2. Write a C program that accepts the vertices and edges of a graph and store it as an adjacency matrix. Implement function to traverse the graph using Depth First Search (DFS) traversal. [15 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Duration: 3 Hours Maximum Marks: 35

Q 1. Write a C program for the Implementation of Prim's Minimum spanning tree algorithm.

[15 Marks]

Q 2. Write a C program that accepts the vertices and edges of a graph and stores it as an adjacency matrix. Display the adjacency matrix. [15 Marks]

OR

Q 2. Write a menu driven program to implement hash table using array (insert, delete, display). Use any of the above-mentioned hash functions. In case of collision apply linear probing.

[15 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Duration: 3 Hours Maximum Marks: 35

- Q 1. Write a C program that accepts the vertices and edges of a graph. Create adjacency list.

 [15 Marks]
- Q 2. Write a program which uses binary search tree library and counts the total nodes and total leaf nodes in the tree.

int countLeaf(T) – returns the total number of leaf nodes from BST. [15 Marks]

OR

- Q 2. Write a C program for the implementation of Topological sorting. [15 Marks]
- Q 3.Viva [5 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Maximum Marks: 35

[15 Marks]

Q 1. Write a C program which uses Binary sear	ch tree library and displays nodes at each level, coun
of node at each level.	[15 Marks]
node at each level.	
Q 2. Write a program to sort n randomly genera	ated elements using Heansort method
2. Write a program to soft if failed fifty general	ned ciements using ricapsort method.

OR

Duration: 3 Hours

Q 2. Write a C program that accepts the vertices and edges of a graph and store it as an adjacency matrix. Implement function to traverse the graph using Breadth First Search (BFS) traversal.

[15 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Duration: 3 Hours	Maximum Marks: 35
Q 1. Write a C program for the Implementation of Prim's	Minimum spanning tree algorithm.
	[15 Marks]
Q 2. Write a menu driven program to implement hash tabany of the above-mentioned hash functions. In case of collis	
	[15 Marks]
OD	
OR	
Q 2. Write a C program that accepts the vertices and edge matrix. Display the adjacency matrix.	es of a graph and stores it as an adjacency [15 Marks]

Q3. Viva

[5 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Duration: 3 Hours	Maximum Marks: 35
Q 1. Write a menu driven program to implement has	ch table using array (insert, delete, display). Usa
any of the above-mentioned hash functions. In case of	
	[15 Marks]
Q2. Write a program to sort n randomly generated e	laments using Hean sort method [15 Marks]
Q2. Write a program to soft if faildoning generated e.	iements using fleap soft method. [13 Marks]
OR	
Q 2. Write a C program which uses Binary search trand total levels in the tree.	ee library and displays nodes at each level, [15 Marks]
	55.16.1.1
Q 3. Viva	[5 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

	Data Structure Laboratory	
Duration: 3 Hours	\mathbf{N}	Iaximum Marks: 35
Q 1. Write a program to sort	n randomly generated elements using l	Heapsort method. [15 Marks]
Q 2. Write a C program for	the Implementation of Prim's Minimun	n spanning tree algorithm.
1 0		[15 Marks]
	OR	
	at accepts the vertices and edges of a grays to print indegree of all vertices of grays	- · · · · · · · · · · · · · · · · · · ·
madini imprement ranchon	s to print indegree of air vertices of grap	[Te Marks]

Q 3. Viva

[5 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Duration: 3 Hours Maximum Marks: 35

- Q 1. Write a C program that accepts the vertices and edges of a graph. Create adjacency list and display the adjacency list. [15 Marks]
 - Q 2. Implement a Binary search tree (BST) library (btree.h) with operations create, insert, postorder. Write a menu driven program that performs the above operations.

[15 Marks]

OR

Q 2. Write a C program that accepts the vertices and edges of a graph and store it as an adjacency matrix. Implement function to traverse the graph using Depth First Search (BFS) traversal. [15 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory	
Ouration: 3 Hours	Maximum Marks: 35
Q 1. Implement a Binary search tree (BST) library (btree	•
Write a menu driven program that performs the above of	perations. [15 Marks]
Q 2. Write a C program that accepts the vertices and edg	
and display the adjacency list.	[15 Marks]
OR	
Q 2. Write a C program that accepts the vertices and edge matrix. Implement function to traverse the graph using I	5 1
traversal.	[15 Marks]
44.01341.	[10 Humo]

[5 Marks]

Q 3. Viva

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Bata Structu	are Euboratory
Duration: 3 Hours	Maximum Marks: 35
Q 1. Write a menu driven program to implement	t hash table using array (insert, delete, display). Use
any of the above-mentioned hash functions. In case	
	[15 Marks]
Q 2. Write a C program that accepts the vertices and display the adjacency list.	and edges of a graph. Create adjacency list [15 Marks]
and display the adjacency list.	[13 Warks]
OR	
Q 2. Write a C program that accepts the vertices a matrix. Implement function to traverse the graph	
traversal.	[15 Marks]
Q 3. Viva	[5 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Q 1. Implement a Binary search tree (BST) library (btree.h) with operations – create, insert, preorder. Write a menu driven program that performs the above operations. [15 Marks]

Q 2. Write a C program for the implementation of Topological sorting. [15 Marks]

OR

Q 2. Write a C program that accepts the vertices and edges of a graph and store it as an adjacency matrix. Implement functions to print indegree, outdegree and total degree of all vertices of graph.

[15 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Duration: 3 Hours	Maximum Marks: 35
Q 1. Write a menu driven program to implement hash table us any of the above-mentioned hash functions. In case of collision a	
any of the above mentioned hash functions. In case of comsion of	appry micar prooms.
	[15 Marks]
Q 2. Write a program which uses binary search tree library ar	nd counts the total nodes and total
leaf nodes in the tree. int countLeaf(T) – returns the total number of leaf nodes from	BST [15 Marks]
OR	
Q 2. Write a C program that accepts the vertices and edges of a matrix. Implement function to traverse the graph using Bread	
traversal.	[15 Marks]
Q 3. Viva	[5 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Duration: 3 Hours	Maximum Marks: 35
Q 1. Implement a Binary search tree (BST) library (btree.h) w	ith operations greate insert preorder
Write a menu driven program that performs the above operation	
	[15 Marks]
Q2. Write a menu driven program to implement hash table	
Use any of the above-mentioned hash functions. In case o probing.	f collision apply linear [15 Marks]
OR	[13 Marks]
Q 2. Write a C program which uses Binary search tree library	and displays nodes at each level,
and total levels in the tree.	[15 Marks]
Q 3. Viva	[5 Marks]
Q 0. 1114	[5 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Duration: 3 Hours	Maximum Marks: 35

Q 1. Write a C program for the Implementation of Prim's Minimum spanning tree algorithm.

[15 Marks]

Q 2. Write a menu driven program to implement hash table using array (insert, delete, display). Use any of the above-mentioned hash functions. In case of collision apply linear probing.

[15 Marks]

OR

Q 2. Write a C program that accepts the vertices and edges of a graph and store it as an adjacency list. Implement function to traverse the graph using Breadth First Search (BFS) traversal. [15 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Duration: 3 Hours	Maximum Marks: 35
Q 1. Write a menu driven program to implement hash to	
of the above-mentioned hash functions. In case of colli	[15 Marks]
Q2. Write a program to sort n randomly generated e	lements using Heapsort method. [15 Marks]
OR	
Q 2. Write a C program which uses Binary search tr	ee library and displays nodes at each level
and total levels in the tree.	[15 Marks]
Q 3. Viva	[5 Marks]
· · · · · · · · · · · · · · · · · ·	[o mano]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Duration: 3 Hours Maximum Marks: 35

Q1. Write a menu driven program to implement hash table using array (insert, delete, display). Use any of the above-mentioned hash functions. In case of collision apply linear probing.

[15 Marks]

Q2. Write a program to sort n randomly generated elements using Heapsort method. [15 Marks]

OR

Q 2. Write a C program which uses Binary search tree library and displays nodes at each level, and total levels in the tree. [15 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Duration: 3 Hours Maximum Marks: 35

Q 1. Write a C program that accepts the vertices and edges of a graph and stores it as an adjacency matrix. Display the adjacency matrix. [15 Marks]

Q 2. Implement a Binary search tree (BST) library (btree.h) with operations – create, insert, inorder. Write a menu driven program that performs the above operations.

[15 Marks]

OR

 $\ensuremath{\mathrm{Q}}$ 2. Write a C program for the Implementation of Prim's Minimum spanning tree algorithm.

[15 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Duration: 3 Hours Maximum Marks: 35

Q 1. Implement a Binary search tree (BST) library (btree.h) with operations – create, insert, in order. Write a menu driven program that performs the above operations. [15 Marks]

Q 2. Write a C program that accepts the vertices and edges of a graph. Create adjacency list and display the adjacency list. [15 Marks]

OR

Q 2. Write a C program that accepts the vertices and edges of a graph and store it as an adjacency matrix. Implement function to traverse the graph using Depth First Search (DFS) traversal. [15 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Duration: 3 Hours	Maximum Marks: 35

Q 1. Write a menu driven program to implement hash table using array (insert, delete, display). Use any of the above-mentioned hash functions. In case of collision apply linear probing.

[15 Marks]

Q 2. Write a program which uses binary search tree library and count the total nodes and total leaf nodes in the tree.

int countLeaf(T) – returns the total number of leaf nodes from BST

[15 Marks]

OR

Q 2. Write a C program that accepts the vertices and edges of a graph and store it as an adjacency matrix. Implement function to traverse the graph using Breadth First Search (BFS) traversal. [15 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Duration: 3 Hours Maximum Marks: 35

Q 1. Write a menu driven program to implement hash table using array (insert, delete, display). Use any of the above-mentioned hash functions. In case of collision apply linear probing.

[15 Marks]

Q 2. Write a program which uses binary search tree library and counts the total nodes and total leaf nodes in the tree.

int count Leaf(T) – returns the total number of leaf nodes from BST [15 Marks]

OR

Q 2. Write a C program for the Implementation of Prim's Minimum spanning tree algorithm. [15 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Duration: 3 Hours Maximum Marks: 35

- Q 1. Write a C program that accepts the vertices and edges of a graph. Create adjacency list and display the adjacency list. [15 Marks]
- Q 2. Implement a Binary search tree (BST) library (btree.h) with operations create, insert, postorder. Write a menu driven program that performs the above operations.

[15 Marks]

OR

Q 2. Write a C program that accepts the vertices and edges of a graph and store it as an adjacency matrix. Implement function to traverse the graph using Depth First Search (DFS) traversal. [15 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Duration: 3 Hours Maximum Marks: 35

Q 1. Write a C program for the Implementation of Prim's Minimum spanning tree algorithm.

[15 Marks]

Q 2. Write a C program that accepts the vertices and edges of a graph and stores it as an adjacency matrix. Display the adjacency matrix. [15 Marks]

OR

Q 2. Write a menu driven program to implement hash table using array (insert, delete, display). Use any of the above-mentioned hash functions. In case of collision apply linear probing.

[15 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Duration: 3 Hours Maximum Marks: 35

- Q 1. Write a program to sort n randomly generated elements using Heap sort method. [15 Marks]
- Q 2. Write a C program for the Implementation of Prim's Minimum spanning tree algorithm. [15 Marks]

OR

Q 2. Write a C program that accepts the vertices and edges of a graph and store it as an adjacency matrix. Implement functions to print indegree of all vertices of graph. [15 Marks]

S.Y.B.Sc.(Computer Science) Practical Examination (2019 Pattern)

Lab Course 243 SEM IV

Data Structure Laboratory

Maximum Marks: 35

Duration: 3 Hours

Q 1. Write a menu driven program to implement hash table using array of the above-mentioned hash functions. In case of collision apply line	
Q2. Write a program to sort n randomly generated elements using	Heapsort method. [15 Marks]
OR	
Q 2. Write a C program which uses Binary search tree library and and total levels in the tree.	displays nodes at each level, [15 Marks]
Q 3. Viva	[5 Marks]