



D.Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY
KASABA BAWADA KOLHAPUR-416006
(An Autonomous Institute)
S. Y. B. Tech-CSE (Semester-III)

END SEMESTER EXAMINATION, OCT/NOV- 2021-22
COURSE NAME: Data Structures, COURSE CODE: 201CSL204

Q. Paper Code:

22SYCSE204304

Day and Date: Monday, 24/01/2022

Time: 11.00 to 12.30Pm

Seat No :

Max. Marks- 50

Instructions:

- i. All Questions are compulsory.
- ii. Figure to the right indicate full marks.
- iii. Give suitable general Instructions
- iv. Any other Course Specific Instructions.

BT	CO's	Q. No.		Marks
		Q.1	Attempt the following	20
2	1	a	What is algorithm? & Explain space & time complexity.	7
3	3	b	Write an algorithm to implement reduction step of quick sort and explain it with example.	7
3	2	c	Compare between bubble sort and selection sort.	6
		Q.2	Attempt the following	15
3	4	a	Use appropriate data structure to implement DFS and explain it in detail. OR Use appropriate data structure to implement preorder traversal on binary tree.	7
2	3	b	Write an algorithm to delete a node with a given item of information from singly linked list.	8
		Q.3	Attempt the following	15
3	4	a	Select and explain appropriate graph traversal technique to find out shortest path between two nodes with example. OR Use appropriate data structure to implement Heap sort.	7
2	3	b	Explain in detail deletion of node from in binary search tree	8
