



**NAVRACHANA
UNIVERSITY**

a UGC recognized University

School: School of Engineering and Technology
Program: Bachelor of Computer Applications
Year: 2nd **Semester:** 3rd
Examination: End Semester Examination
Examination year: December - 2021

Course Code: CA205 **Course Name:** Data Structures and Algorithms
Date: 06/12/2021
Time: 8:30 to 10:30 am

Total Marks: 40
Total Pages: 01

Instructions:

- Write each answer on a new page.
- Use of a calculator is permitted.
- All Questions are compulsory.
- *COs=Course Outcome mapping. # BTL=Bloom's Taxonomy Level mapping

Q. No.	Details	Marks	COs*	BTL#
Q.1	Differentiate the Following: I. Primitive V/S Non-Primitive Data Structure. II. Simple Queue V/S Priority Queue	5	CO1	BTL 1,2, 3
Q.2	What do you mean by Average, best, Worst case analysis? State the use of each.	5	CO1	BTL 1,2,4
Q.3	Explain Circular link list with its operation.	5	CO2	BTL 1,2
Q.4	Explain following: I. Application of stack. II. Application of Link List.	5	CO2	BTL 1,2, 3
Q.5	What is Tree Traversal? Write an algorithm for Inorder Traversal.	5	CO3	BTL 1,2, 3
Q.6	Explain Conversion of general tree to binary tree. Create BST for the following data. 4 3 8 2 1 6 9 5 7 (Consider 4 is a root.)	5	CO3	BTL 1,2, 3, 6
Q.7	Give tracing of following list of number using Bubble Sort. 123,456,342,789,90,2,875,453,290,998	5	CO4	BTL 1,2, 3, 6
Q.8	What is Searching? Write an algorithm for Binary Search.	5	CO4	BTL 1,2,4

*****End of Question Paper*****