

<p style="text-align: center;">SVKM'S NMIMS MUKESH PATEL SCHOOL OF TECHNOLOGY MANAGEMENT & ENGINEERING Academic Year: 2024-2025</p>		
Program: BTI	Stream: Computer	Year: III Semester: V
Subject: Basic Data Structures		Time: 45 Minutes (09:10 am to 09:55 am)
Date: 24.08.2024		No. of Pages: 1
Marks: 10		
Test-I Set-B		

Instructions: Candidates should read carefully the instructions.

- 1) **Figures in brackets on the right hand side indicate full marks.**
- 3) **Assume Suitable data if necessary.**
- 4) **Question 1 is compulsory.**
- 5) **Answer any 2 from the remaining questions.**

Q1		Answer briefly:	
CO- 1 ; SO- 4 ; BL- 2	a.	Draw a diagram of classification of data structures. Explain Linear data structures.	[2]
CO- 3; SO- 5; BL- 5	b.	Evaluate the following infix expression into postfix expression using stack. 2 4 + 6 3 / * 8 7 * 2 - +	[2]
Q2 CO- 2; SO-5; BL-3		Write a C/C++ program to find Greatest Common Divisor (GCD) of two integer numbers with recursive function.	[3]
Q3 CO-2 ; SO- 5; BL- 3		Write a C/C++ program to make structure called MPSTME. Data members are: Names of students, program, semester, divisions, subjects. Develop a program to enter 5 records of a structure and display how many students are there in computer branch in one division.	[3]
Q4 CO-2; SO- 5; BL-3		Write a C/C++ program to swap smallest and largest element in an array using pointers.	[3]