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# PRESIDENCY UNIVERSITY

## BENGALURU

### Mid - Term Examinations – October 2025

**Date:** 07-10-2025

**Time:** 11.45am to 01.15pm

<b>School:</b> SOCSE	<b>Program:</b> B.Tech	
<b>Course Code:</b> CSE1500	<b>Course Name:</b> Computational thinking using Python	
<b>Semester:</b> III	<b>Max Marks:</b> 50	<b>Weightage:</b> 25%

<b>CO - Levels</b>	<b>CO1</b>	<b>CO2</b>	<b>CO3</b>	<b>CO4</b>	<b>CO5</b>
<b>Marks</b>	<b>16</b>	<b>14</b>	<b>20</b>	<b>0</b>	<b>0</b>

#### Instructions:

- (i) *Read all questions carefully and answer accordingly.*
- (ii) *Do not write anything on the question paper other than roll number.*

#### Part A

**Answer ALL the Questions. Each question carries 2marks.**

**5Q x 2M=10M**

<b>1</b>	List out the four Pillars of Computational thinking.	<b>2 Marks</b>	<b>L1</b>	<b>CO1</b>
<b>2</b>	Differentiate between if-else and if-elif-else constructs with examples.	<b>2 Marks</b>	<b>L2</b>	<b>CO1</b>
<b>3</b>	List out numeric data types in Python.	<b>2 Marks</b>	<b>L1</b>	<b>CO2</b>
<b>4</b>	Identify the advantages of Brute force strategy.	<b>2 Marks</b>	<b>L1</b>	<b>CO2</b>
<b>5</b>	Outline the differences between = and == operators in Python with suitable example?	<b>2 Marks</b>	<b>L2</b>	<b>CO1</b>

## Part B

### Answer the Questions.

**Total Marks 40M**

<b>6.</b>	<b>a.</b>	Discuss the importance of Computational thinking with suitable example.	<b>10 Marks</b>	<b>L2</b>	<b>CO1</b>
	<b>b.</b>	Demonstrate the implementation of relational operators using if else construct with a neat algorithm and flowchart.	<b>10 Marks</b>	<b>L2</b>	<b>CO2</b>
<b>Or</b>					
<b>7.</b>	<b>a.</b>	Describe an algorithm. What are the characteristics of a good algorithm?	<b>10 Marks</b>	<b>L2</b>	<b>CO1</b>
	<b>b.</b>	Explain match statement in python with syntax and suitable example.	<b>10 Marks</b>	<b>L2</b>	<b>CO2</b>

<b>8.</b>	<b>a.</b>	Describe the brute force technique of problem solving. Explain various steps involved in Brute force method. Also list its advantages and disadvantages	<b>10 Marks</b>	<b>L2</b>	<b>CO3</b>
	<b>b.</b>	Write syntax of for loop. Write a Python program to print multiplication tables from 1 to 10.	<b>10 Marks</b>	<b>L3</b>	<b>CO3</b>
<b>Or</b>					
<b>9.</b>	<b>a.</b>	Explain the key features of divide and conquer method. Mention the steps involved and illustrate it using an example	<b>10 Marks</b>	<b>L2</b>	<b>CO3</b>
	<b>b.</b>	Write a Python algorithm and program to check the given number is prime or not. Print primes from 100 to 200.	<b>10 Marks</b>	<b>L3</b>	<b>CO3</b>