



**MID TERM EXAMINATIONS – October-November 2023**

Programme	: B.Tech.	Semester	: Fall 2023-2024
Course Title/ Course Code	: Introduction to Problem Solving and Programming / CSE1021	Slot	: D11+D12+B14
Time	: 1 ½ hours	Max. Marks	: 50

**Answer all the Questions**

Q.No.	Question Description	Marks
1 ✓	“What is the concept of an <u>algorithm</u> , and what <u>purpose</u> does it serve? Explore the significance of <u>algorithms</u> and clarify the key <u>characteristics</u> that define a well-designed algorithm”.	10
2 ✓	“Design an <u>algorithm</u> for computing the <u>area</u> and <u>perimeter</u> of a <u>rectangle</u> , employing both <u>pseudo code</u> and <u>flowchart</u> representations.”	10
3 ✓	Explain in detail about the <u>various operators</u> used in <u>python</u> with suitable example.	10
4 ✓	List out the differences between <u>‘List’</u> and <u>‘Tuple’</u> with example to justify each difference.	10
5 ✓	“Develop a <u>program</u> , featuring a custom function that takes <u>two user-defined numbers</u> as parameters. If the <u>first number</u> is <u>smaller than the second</u> , <u>swap the numbers</u> and <u>return them</u> , with the <u>second number</u> in the place of the <u>first</u> and the <u>first number</u> in place of the <u>second</u> . If the <u>first number</u> is <u>equal to or greater than the second</u> , <u>return the numbers</u> in their <u>original order</u> .”	10

(MOST IMP. FOR TEE) (REPEATED) ⇔⇔⇔

- (i) Array
- (ii) write a python programs.
- (iii) Time complexity &
- (iv) flowchart, Algo & pseudo code -
- (v) fibonacci
- (vi) List, tuple, Dictionary.
- (vii) swap two numbers.