

**CGC- COLLEGE OF ENGINEERING  
LANDRAN (MOHALI)**

Date of Exam.

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Roll No.

1 9 1 4 2 8 2

B.Tech.(App.sci) **MST-1**

**Programming for problem Solving (BTPS- 101-18)**

(Sem. 2<sup>nd</sup>) CSE / IT

Time: 1 Hrs. 30 mins

Max. Marks: 24

**COURSE OUTCOMES:**

CO 1	Understand basics of computer and its parts.
CO 2	Formulate simple algorithms and translate the algorithms to programs (in C language).
CO 3	Implement conditional branching, iteration and recursion.
CO 4	Convert a problem into functions by using searching and sorting techniques on the given list.
CO 5	Use arrays, pointers and structures to formulate algorithms and programs.
CO 6	Apply programming to solve matrix addition and multiplication problems.

**INSTRUCTION TO CANDIDATES:**

1. **SECTION-A** is **COMPULSORY** consisting of four questions carrying **TWO** marks each.
2. **SECTION-B** contains three questions carrying four marks each and students have to attempt any two questions. **SECTION-C** contains three questions carrying four marks each and students have to attempt any **TWO** questions.

**SECTION-A**

- Q1) Classify jump statements? (2)(CO 3)  
 Q2) Explain Case statement? (2)(CO 3)  
 Q3) How many bytes are required for **Int a[20]** statement? (2)(CO 1)  
 Q4) Describe different types of Array. (2)(CO 5)

**SECTION-B**

- Q5) a) Outline a flow charts to find the smallest and larger out of three numbers. (4) (CO 2)  
 b) Define strings? Write a program to perform String manipulation function. (1+3) (CO 5)  
 Q6) Write a "C" program to find out a solution for given Quadratic equation. (4)(CO 2)  
 Q7) Write a program to perform arithmetic operation on 1-D Array. (4) (CO 5)

**SECTION-C**

- Q8) Write a program to sort a given list of numbers in ascending order. (4)(CO 4)  
 Q9) Explain the specification of a Latest PC? Also classify the functionality of each of the component. (2+2) (CO 1)  
 Q10) Discuss the various Control structures available in programming Language? Explain with example? (3+1) (CO 2)