

**NETTUR TECHNICAL TRAINING FOUNDATION**  
**DIPLOMA IN INFORMATION TECHNOLOGY & DATA SCIENCE-CP09**  
**I SEMESTER REGULAR & SUPPLEMENTARY EXAMINATION-JAN 2023**

**Subject: Problem Solving Techniques**

**Total Time: 2 Hr.**

**Subject Code: CP09104T**

**Total Marks: 50 Marks**

**PART B**

**1.0 ANSWER ANY EIGHT OF THE FOLLOWING**

**2\*8=16**

- 1.1 What is an algorithm?
- 1.2 What are the three basic building blocks to use when designing algorithms?
- 1.3 What is a flowchart?
- 1.4 What are the basic data types associated with C?
- 1.5 What is more important than performance?
- 1.6 What are the most fundamental types of algorithms?
- 1.7 Write the four basic steps in solving a problem
- 1.8 What are the types of abstraction?
- 1.9 Why do we need arrays?
- 1.10 Name the three selection structures in C

**2.0 ANSWER ANY SIX OF THE FOLLOWING**

**3\*6=18**

- 2.1 How to Analyse an Algorithm
- 2.2 Write the method for developing an algorithm.
- 2.3 Why is sequencing important?
- 2.4 Write an algorithm to check odd or even number
- 2.5 Draw the flowchart for if else statement
- 2.6 How to write a Pseudo Code?
- 2.7 Write the features of C language
- 2.8 Write the difference between computer hardware and software

**3.0 ANSWER ANY FOUR OF THE FOLLOWING**

**4\*4=16**

- 3.1 Write the characteristics of an algorithm
- 3.2 Write the algorithm and draw the flow chart to convert temperature from Fahrenheit (°F) to Celsius (°C)
- 3.3 What is meant by call by value & call by reference?
- 3.4 Explain the characteristics of computational thinking
- 3.5 Write the program to check whether a number is even or odd using if-else statement in C language
- 3.6 List out the symbols used in flowcharts

