Roll No. _____

B.Tech.(IT)

FIRST SEMESTER

MID TERM EXAMINATION

March 2024

CO 101/102 – Programming Fundamentals

Time: 1.5 Hours

Max.Marks:20

Note: Attempt all questions.
All questions carry equal marks.
Assume suitable missing data, if any.

1) a) i) boolean - Is this a data type or a relational operator?   [CO1][2]
   ii) double - Is this a data type or a bitwise operator?
   iii) / - When seen in code, is this a division slash or a secret passage
   leading to arithmetic operations in programming?
   iv) % - Determine if this is a data type or an arithmetic operator.

   b) Illustrate the difference between a one-dimensional and a two-dimensional array. Provide an example for each, showcasing their respective representations and use case.   [CO3][3]

2) a) Explain the difference between "break" and "continue" statements with the help of an example?   [CO2][2]
   b) Create a program that uses a "switch" statement to determine the day of the week based on a user-input numerical value (1 for Monday, 2 for Tuesday, etc.).   [CO2][2]
   c) Difference between do and do while loop?   [CO2][1]

3) a) In a computer's memory, a specific location is represented by the hexadecimal address 0x1A7F. If you convert this address to binary, what is the binary representation of this memory location?   [CO1][2]
   b) Difference between for loop and while loop?   [CO2][1]
   c) Create a program with nested loops to generate the following pattern: [CO2][2]

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4) a) Explain the operations that can be performed on arrays and provide examples? [CO3][2]

b) What is nested loop? Explain with example? [CO2][2]

c) Difference between structure and union? [CO3][1]

while loop checks the condition then executes the program

do while takes an input executes then checks the condition and execute further