Minor 1

Course Name: Computer Programming and Problem Solving   Course Code: CS100

Paper Code D   Full Marks: 25   Duration: 45 minutes   Date: 14.12.2022

Note: It is mandatory to: A) Write the paper code at the start of your answer script.
B) Only write the option number for Q1.
C) Write comments explaining the purpose of an instruction/code block in your code.
D) Write proper cues/prompts for user input and code output in your codes.

1. Choose the correct option: **(5)**
   a) A pointer is
      i.   A keyword in C
      ii. A variable that stores address of an instruction
      iii. A variable that stores address of another variable
      iv. All of the above
   b) If a function does not return any value, the return type is
      i.   zero   ii. void   iii. int   iv. float
   c) %d , %f, %u specify
      i.   Integers, floats, unsigned integers
      ii. Floats, integers, unsigned integers
      iii. They can indicate anything
      iv. None of the above
   d) A pointer to a pointer is indicated by
      i.   *   ii. **   iii. ***   iv. None of the above
   e) A C variable name cannot contain
      i.   Blank spaces
      ii. Hyphens
      iii. Decimal points
      iv. All the above

2. Write a C program to print the following patterns on screen. Use two separate loops.   **(10)**

   ```
        *                              * * * *
        * *                            * * *
        * * *                          * *
   a)   * * * *                    b)  *
   ```

3. Write a C program to implement two separate functions (funcA and funcB) to determine if an integer is an Armstrong number or not. Take user input and print results from main(). Do NOT use recursion.   **(10)**
   a) Use call by value in funcA   b. Use call by reference in funcB