

## Minor 1

Course Name: Computer Programming and Problem Solving

Course Code: CS100

Paper Code A

Full Marks: 25

Duration: 45 minutes

Date: 14.12.2022

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**Note: It is mandatory to: A) Write the paper code at the start of your answer script.  
B) Only write the answer's option numbers 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. The operator used to get value at address stored in a pointer variable is
  - i. \*
  - ii. &
  - iii. &&
  - iv. ||
- c. Which header file should be included to use functions like pow() and sqrt()?
  - i. memory.h
  - ii. stdlib.h
  - iii. math.h
  - iv. stdio.h
- d. A C variable name cannot start with
  - i. An alphabet
  - ii. A number
  - iii. A special symbol other than underscore
  - iv. Both (2) & (3) above
- e. In the below code snippet, what will be the output?

```
int a;  
a = 5 / 2;  
printf("%d",a);  
i. 2.5  
ii. 3  
iii. 2  
iv. 0
```

2. Write a C program to implement a Simple calculator (addition, subtraction, multiplication, division, exponentiation) using switch. (10)
3. Write a C program to implement two separate functions (funcA and funcB) to calculate the factorial value of any integer entered through the keyboard. 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