

**2111000102040002**  
**B.C.A. F.Y (Sem – II)**  
**Examination November -2023**  
**Programming Skills**

**Seat No:**

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**[Time: Three Hours]**

**[Max. marks: 70]**

**Student's Signature**

**Q.1 Answer the following (Any Seven)**

**14**

- 1) What is global variable? How to use it in function if same name of variable exists in function as a local variable in C?
- 2) What is the output of following code in C?  

```
void disp()
{
    printf("Hello");
}

void main()
{
    disp();
    main();
    getch()
}
```
- 3) What is the difference between actual parameter and formal parameter in C?
- 4) What is the use of union in C?
- 5) What is the output of the given below program in python?  

```
if 3+5 == 7:
    print("Python")
else:
    print("Programming")
print("Language")
```
- 6) How to sort list element in python? Give example.
- 7) How to know the type of variable in Python? Give one example of it.
- 8) Define PVM. Explain significance of it.
- 9) What is the use of *typedef* in C?

**Q.2 [A] Answer the following questions. (Any Two)**

**10**

- 1) What is nested structure? Explain with an example in C.

- 2) What is the difference between call by value and call by reference? Give example in C.
- 3) How to calculate address of 2-D array element? Explain row major with example in C.

[B] What is Recursive function? Explain with example in C.

4

OR

[B] Define structure. How to access structure members in C? Explain it with proper example.

4

**Q.3 [A] Answer the following question. (Any Two)**

12

- 1) How to create user define function in Python? Explain categories of function arguments.
- 2) Define an operator. Explain arithmetic, relational and membership operators with an example.
- 3) What is *while* loop in python? Explain *break* and *continue* in *while* loop with proper example.
- 4) Write a note on sets and its methods with example.

[B] What is dynamic declaration of variable? How to assign values to multiple variables in Python?

2

OR

[B] Differentiate between `loc()` and `iloc()` functions.

2

**Q.4 [A] Answer the following questions. (Any Two)**

10

- 1) Explain Python's String methods with example.
- 2) How to create Dictionary in Python? Discuss various methods with example.
- 3) What is tuple in Python? Explain various methods with example.
- 4) Explain conditional statement in Python.

[B] Explain importance of Pandas dataframe and also discuss creation of dataframe using list.

4

OR

[B] Discuss Numpy with its methods.

4

**Q.5 [A] Answer the following questions. (Any Two)**

10

- 1) What is type casting in python? Explain available casting methods with examples.
- 2) How to pass unknown number of parameters as argument in function? Explain with example in python.
- 3) Explain numeric types in Python.

**[B]** Write a Python script to create a data frame using list in python. Include following items at runtime in list. **4**

(sid,sname,sub1,sub2,sub3,sub4,sub5,sub6,total,per).

Calculate total and percentage and display result based on percentage.

**OR**

**[B]** Create user define function named rev\_array() in C that accept an array as argument and display elements of array in reverse. **4**