

FACULTY OF SCIENCE  
B. Sc II SEMESTER (CBCS R-20) REGULAR EXAMINATION AUGUST 2023  
DATA SCIENCE II  
PROBLEM SOLVING & PYTHON PROGRAMMING

BSC/275/AUG23

Time: 3 Hours]

SECTION - A (10 X 4 = 40 Marks)

[Max. Marks: 80

1. Answer any EIGHT questions

- Explain any five applications of python.
- What is type conversion? Explain with example
- What is nested if statements? Write its syntax
- Write short note on PIP.
- Discuss briefly about command line argument.
- List any five string methods.
- What is a list? Explain its syntax
- Write a short note on dictionaries.
- Explain any two functions used to access filenames and their paths.
- Write about id() and instance()
- Write about super() function
- Define functional programming. write about lambda function.

SECTION - B (4 X 12 = 48 Marks)

Answer ALL questions.

2. a) Explain in detail about algorithm. State the properties of a good algorithm. Give the steps for creating an algorithm along with its advantages and disadvantages.

OR

b) With the help of sample programs explain the looping statements in python.

3. a) Write a short note on . i). default parameters ii). Keyword arguments.

OR

b). i). Explain the various string methods.

ii). Explain the general string formatting methods.

4. a). Explain the tuple operations, methods and built-in functions.

b). i). Define errors and its type. Explain the various types of exception in python.  
ii). Explain how modules are created and imported in python.

5. a). Discuss in detail about polymorphism with an example of an python code snippet.

OR

b). i). explain the concept of iterators.

ii). What is a generator function? Explain with an example program.

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