

M.C.A. DEGREE EXAMINATIONS, JANUARY 2022.

First Semester

MC 4103 – PYTHON PROGRAMMING

(Regulations : 2021)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. Outline the use of break statement in Python.
2. Write a Python program to accept two numbers, find the greatest and print the result.
3. Outline a list with an example.
4. What is a module? Give example.
5. Write the syntax for opening a file in Python for reading only.
6. Differentiate text and binary file in Python.
7. How do you use command line arguments to give input to the program?
8. How are modules loaded in Python?
9. How do you create an instance of a class in Python?
10. Define encapsulation.

PART B — ($5 \times 13 = 65$ marks)

11. (a) Elaborate loop structures in Python with an example. (13)

Or

- (b) (i) Write a Python program using while loop to print the first n numbers. (7)

- (ii) Write a Python program to compute the factorial of a given number. (6)

12. (a) Define dictionary in Python. Outline the operations on dictionaries with an example. (13)

Or

- (b) (i) What is tuple in Python? How does it differ from a list? Give example. (7)
- (ii) Python strings are immutable. Justify with an example. (6)
13. (a) Describe in detail how exceptions are handled in Python. Give relevant examples. (13)

Or

- (b) (i) Explain with an example the different modes to read data from a text file and write data to a text file. (10)
- (ii) What is use of seek () and tell ()? Give example. (3)
14. (a) Outline the various python libraries used for data processing and visualization with an example. (13)

Or

- (b) What is the purpose of using framework? Present an outline of Django and Web2Py framework. (13)
15. (a) What is inheritance? Explain the types of inheritance with an example. (13)

Or

- (b) (i) How to define a class method and a static method? Give example. (9)
- (ii) Differentiate class method and static method. (4)

PART C — (1 × 15 = 15 marks)

16. (a) (i) Outline the operator precedence of arithmetic operators in Python and write a Python program to exchange the value of two variables. (8)
- (ii) Write a Python program using function to find the sum of first 'n' even numbers and print the result. (7)

Or

- (b) (i) Write a Python program to perform linear search on a list. (7.5)
- (ii) Write a Python program to store 'n' numbers in a list and sort the list. (7.5)