

CBCS SCHEME

18MCA32



Third Semester MCA Degree Examination, June/July 2024 Programming using Python

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is debugging? Explain various types of errors that can occur in a program. (08 Marks)
- b. Discuss the usage of the following with respect to print() function:
i) sep argument ii) end argument iii) .format(argument) (06 Marks)
- c. Demonstrate any 6 operations on strings. (06 Marks)

OR

- 2 a. Explain a function definition in python with its execution sequence. (08 Marks)
- b. With the help of a neat diagram, explain how does the computer run a python program. (06 Marks)
- c. Predict the output and justify your answer:
(i) -11%9 (ii) 7.7 // 7 (iii) (200 - 70)*10/5 (iv) not 0.0
(v) 5*1**2 (vii) 10**2 > 8%1 + 95 and 5% 3!=5/3 (06 Marks)

Module-2

- 3 a. Elaborate the process of designing your own modules with a clear example. (08 Marks)
- b. Describe the steps to test your code semi-automatically with an example. (08 Marks)
- c. Write a program to search an element using linear search. (04 Marks)

OR

- 4 a. Discuss about the process of combining comparisons. Write a short note on short circuit evaluation performed by python when evaluating combined comparisons. (08 Marks)
- b. Write a python program to find the roots of a quadratic equation. (08 Marks)
- c. Explain while and for loops with examples. (04 Marks)

Module-3

- 5 a. Explain the process of modifying lists using memory model. (08 Marks)
- b. Explain the controlling of loops using break and continue with example. (08 Marks)
- c. "Lists are Heterogeneous". Support the statement with an example. (04 Marks)

OR

- 6 a. Explain any 8 list methods with example. (08 Marks)
- b. Explain in detail about processing lists using indices. (10 Marks)
- c. What is a list of lists? Give an example. (02 Marks)

Module-4

- 7 a. Explain the various techniques for reading files with example. (08 Marks)
- b. What are sets in Python? Explain any 5 set operations. (08 Marks)
- c. Explain any 4 Dictionary operations with examples. (04 Marks)

OR

- 8 a. Describe the process of string and accessing data using dictionaries. (10 Marks)
b. Write a python program to read a word and print the number of letters, vowels and percentage of vowels in the word using dictionary. (10 Marks)

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- 9 a. Explain any 10 GUI widgets with respect to tkinter. (10 Marks)
b. List out and explain the phases involved in object-oriented programming. (10 Marks)

OR

- 10 a. Explain about the key elements to build layer GUIs – the Models, Views and Controllers. Give an example. (10 Marks)
b. Demonstrate the process of grouping widgets with the frame type. (10 Marks)
