

END TERM EXAMINATION

THIRD SEMESTER [BCA] DECEMBER 2024

Paper Code: BCAT-211

Subject: Basics of Python Programming

Time: 03 Hours

Maximum Marks:60

Note: Attempt five questions in all including Q. no. 1 which is compulsory.
Select one question from each unit

- Q1 Write **short notes** on the following: (2x10=20)
- Give a brief account of the Origin and need for Python Programming.
 - What is IDLE? Write two modes of Python IDLE.
 - Explain any two methods of List with examples.
 - Give a brief account of the Formal Arguments and Actual Arguments.
 - Differentiate between break and continue statements.
 - Explain any two features of Python Programming Language
 - Differentiate between Mutable and Immutable Objects.
 - Compare between Text Files and Binary Files.
 - What is a membership operator in Python? Explain it with an example.
 - Explain NumPy Library in brief.

UNIT-I

- Q2
- Explain in detail the various data types in Python Programming Language. (5)
 - Differentiate between for Loop and while Loop with Python code. (5)

OR

- Q3
- Explain in detail about the various Operators in Python Programming Language. (5)
 - What is String in Python Programming Language? Give examples of various String handling functions and methods in Python. (5)

UNIT-II

- Q4
- Explain the Dictionary and its various operations and methods with examples. (5)
 - Make a list of the first 10 letters of the alphabet, then use the slicing to do the following operations: (5)
 - Print the first 3 letters of the list
 - Print any 3 letters from the middle(6)

OR

- Q5
- Explain Tuples and its various operations and methods with examples. (5)
 - Create a dictionary whose keys are month names and whose values are the number of days in the corresponding months. (5)
 - Ask the user to enter a month name and use the dictionary to tell them how many days are in the month.
 - Print all the keys in the alphabetical order.
 - Print out all the months with 31 days.

UNIT-III

- Q6
- Write a program that uses a user-defined function that accepts name and gender (as M for Male, F for Female) and prefixes Mr. / Ms. Based on the gender. (5)
 - Explain any three methods of math module with an example. (5)

P.T.O.

(OR)

- Q7 a) Write a menu-driven program to implement a basic calculator. **(5)**
 b) Explain any three methods of random module with an example. **(5)**

UNIT-IV

- Q8 a) Create a binary file with roll number, name, marks and perform the following operations. **(5)**
 • Update the marks.
 • Delete the records.
 • Display the records.
 b) Explain the features of the NumPy Library. Explain any two methods of NumPy Library. **(5)**

(OR)

- Q9 a) Create a binary file with Item number, Name, Price and perform the following operations. **(5)**
 • Search the marks.
 • Append the records.
 • Display the records.
 b) Explain the features of the matplotlibLibrary. Explain any two methods of matplotlibLibrary. **(5)**
