

Enrolment No. _____

NATIONAL FORENSIC SCIENCES UNIVERSITY, DELHI CAMPUS
B.Tech. - M.Tech. CSE Integrated-Sem V, September 2023
Term Assessment – 1

Subject Code: CTBTCSE SV-P3
Subject Name: Computer Programming with Python

Date: 19/09/2023
Time: 45 minutes
Total Marks: 25

Instructions:

1. This Question Paper consists of 4 Questions.
2. Attempts all the questions.

Q1. What is python? Briefly explain the various features of python. 5M

OR

What are the different control statements in python? Briefly explain any three.

Q2. Explain the following data types in python (any two) 2 × 5M

- a) Numeric type
- b) Sequence type
- c) Sets

Q3. Explain print function. 5M

Q4. What are the different operators in python? Briefly explain assignment operators. 5M

END OF PAPER

END OF PAPER

Enrolment No. 802

NATIONAL FORENSIC SCIENCES UNIVERSITY, DELHI CAMPUS
B.Tech. - M.Tech. CSE Integrated-Sem V, October 2023
Mid Semester Examination

Subject Code: CTBTCSE SV-P3
Subject Name: Computer Programming with Python

Date: 01/11/2023
Time: 90 minutes
Total Marks: 50

Instructions:

1. This Question Paper consists of 7 Questions.
2. Attempts all the questions.

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- ☒ Q1. Write a python program for bubble sort algorithm. **5M**
- ☒ Q2. Explain the while and for loops with suitable examples. **6M**
- ☒ Q3. Explain input function and command line arguments. **6M**
- ☒ Q4. What are the different operators in python? Briefly explain bitwise and logical operators. **6M**
- ☒ Q5. What is python? Briefly explain the various features of python. **6M**
- OR**
- ☒ Explain break, continue and pass statement.
- ☒ Q6. What are arrays? What are different ways of creating arrays in numpy? Explain briefly. **6M**
- ☒ Q7. Write short note on following (any three) **15M**
- ☒ a) Numeric data type
 - ☒ b) Sequence data type
 - ☒ c) Sets data type
 - ☒ d) Different attributes of an array

END OF PAPER

Seat No.: _____

Enrolment No. _____

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NATIONAL FORENSIC SCIENCES UNIVERSITY
B.Tech-M.Tech CSE(Cyber Security) - Semester - V - January - 2024

Subject Code: CTBTCSE SV P3

Date: 03/01/2024

Subject Name: Computer Programming with Python

Time: 11:00 AM to 02:00 PM

Total Marks: 100

Instructions:

1. Write down each question on a separate page.
2. Attempt all questions.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

- Q.1**
- (a) What is Interpreter? Explain how Python interpreter works. 05
 - (b) What is the difference between == and is operator in Python? 05
 - (c) Explain arithmetic operators in Python with example. 07
- or
- (c) Explain Comparison operators in Python with example. 07
- Q.2**
- (a) Explain conditional statements in Python. 05
 - (b) Write a Python program to add and subtract two matrix together. 05
 - (c) Write a Python program to remove the first occurrence of a specified element from an array. 07
- or
- (c) Write a Python program to search for a specific value from a given list of values using the linear search method 07
- Q.3**
- (a) What is a list in Python? Demonstrate the use of any three methods of the list. 08
 - (b) Is String a mutable data type? Also explain the string operations length, indexing and slicing in detail with an appropriate example. 08
- Q.4**
- (a) Explain reading and writing text files in Python with example. 05
 - (b) Write a Python program that takes a list of numbers as input and calculates the product of all the positive numbers in the list. Implement a custom exception NoPositiveNumbersError to handle the case when there are no positive numbers in the list. If the exception occurs, print an appropriate error message. 05
 - (c) Explain runtime polymorphism with an example. 07
- or
- (c) What are the differences between abstract class and interface? Write a Python program in which Maruti and Honda sub-classes implement the abstract methods of the superclass Car. 07

- Q.5 (a) Write a Python program to implement the concept of inheritance. 05
- (b) Create a class Employee with data members: name, department and salary. 05
Create suitable methods for reading and printing employee information.
- (c) Write a Python program to overload the '+' and '*' operators. 07
- or
- (c) Explain the key functionalities of the random module in Python, providing 07
examples for at least three different functions.
- Q.6 (a) What is a dictionary in Python? Explain how to insert, remove and update 08
elements of the dictionary.
- (b) Explain keyword and variable length arguments in the Python function with 08
examples.

END OF PAPER

