B.Sc. (IT) / BCA   (Sem.–3)

PROGRAMMING IN PYTHON

Subject Code : UGCA1914

M.Code : 78180

Date of Examination : 15-02-22

Time : 2 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE question(s), each question carries 12 marks.

1. What is role of Path Variables in installing Python? Discuss different applications and features of Python language. What are the advantages of Python over C/C++ Language?

2. What are the common built-in data types in Python? What is the difference between list and tuples in Python? Write suitable Python code to illustrate.

3. Define the need of Multithreading in a programming language. How can it improve performance of the Program? How do you achieve multithreading in Python? Write a Python Program to illustrate the benefit of Multithreading.

4. What is a lambda function? Give an example of when it's useful in a program and when it's not. Write in detail about declaration of functions and their types in Python.

5. a) What are the different attributes of a Python class? How do they help in accessing an object?

   b) Write a Python program to check whether the string is Palindrome or not.

   c) Write a Python Program to Parse a String to a Float or Integer.

6. a) Write a Python program to Count the frequencies in a list using dictionary.

   b) Write a Python program to convert time from 12 hour to 24 hour format.

   c) Write a Python Program to print all prime factors of a given number.

7. a) Write a Python program to Count the Number of occurrences of a key-value pair in a text file.

   b) Write a Python program to reverse the content of a file and store it in another file.

8. What advantages do Numpy arrays offer over (nested) Python lists? Explain inheritance and Polymorphism in Python with an example.

Note: Any student found attempting answer sheet from any other person(s), using incriminating material or involved in any wrong activity reported by evaluator shall be treated under UMC provisions.

Student found sharing the question paper(s)/answer sheet on digital media or with any other person or any organization/institution shall also be treated under UMC.

Any student found making any change/addition/modification in contents of scanned copy of answer sheet and original answer sheet, shall be covered under UMC provisions.