15CS664

Sixth Semester B.E. Degree Examination, Dec.2019/Jan.2020
Python Application Programming

Time: 3 hrs.　　　　　　　　　　　　　　　　　　　　Max. Marks: 80

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

Module-1

1 a. Explain the salient features of python. **(05 Marks)**
   b. Write a python program to calculate the area of square, rectangle and circle. Print the results. Take input from user. **(05 Marks)**
   c. What are user defined functions? How can we pass parameters in user defined functions? Explain with suitable example. **(06 Marks)**

OR

2 a. Explain the concept of conditional execution alternate execution and chained conditions with suitable examples. **(06 Marks)**
   b. Write a python program to create a user defined function to find maximum and minimum letter in string. Also find the length the string without using inbuilt function. **(05 Marks)**
   c. Explain the concept of type conversion functions and math functions in python with examples. **(05 Marks)**

Module-2

3 a. Explain the working of while loop in python with suitable example. **(05 Marks)**
   b. Write a python program to demonstrate counting, summing and average of elements using loops. **(05 Marks)**
   c. What is a string? Write a python program to demonstrate traversal through a string with a loop. Also explain the concept of string slicing. **(06 Marks)**

OR

4 a. With syntax and example code, explain the working of definite loop in python. **(05 Marks)**
   b. Write a python program to concatenate and compare two strings. Read the strings from user. **(05 Marks)**
   c. Explain fileopen, fileclose, fileread and filewrite concepts in python with example. **(06 Marks)**

Module-3

5 a. What is a list? Explain the concept of list slicing and list traversing with example. **(05 Marks)**
   b. Explain the concept of comparing tuples. Describe the working of sort function with python code. **(06 Marks)**
   c. Write a python program to search for lines that start with 'F' followed by 2 characters, followed by 'm:'. **(05 Marks)**

OR

6 a. What is dictionary? How is it different from list? Write a python program to count occurrence of characters in a string and print the count. **(06 Marks)**
   b. With an example program, illustrate how to pass function arguments to list. **(05 Marks)**
   c. Write a python program to search lines that start with 'X' followed by any non whitespace characters, followed by ':' ending with number. Display the sum of all these number. **(05 Marks)**

Module-4

7 a. Define class and object? What are programmer defined types? Explain with example.
(05 Marks)

   b. Illustrate the concept of pure function with python code.   (05 Marks)

   c. What is the difference between method and function? Explain the working of init method with suitable code.   (06 Marks)

OR

8 a. Define attribute? With the help of python code, explain how functions return instance values.   (06 Marks)

   b. Explain the concept of modifier with python code.   (05 Marks)

   c. What is type based dispatch? Illustrate with python example.   (05 Marks)

Module-5

9 a. Define socket? Writ a python program that makes a connection to a webserver and follows the rules of HTTP protocol to request a plain test document and display what server sends back.   (06 Marks)

   b. What is XML? How is it used is python? Explain parsing of XML with example.   (05 Marks)

   c. Define cursor? Explain connect, execute and close command of databases with suitable example.   (05 Marks)

OR

10 a. Write a python code to read the file from web using urelib and retrieve the data of the file. Also compute the frequency of each word in the file.   (06 Marks)

   b. What is JSON? Illustrate the concept of parsing JSON python code.   (05 Marks)

   c. Explain the concept of using JOIN to retrieve data in python.   (05 Marks)