CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐   15CS664

Sixth Semester B.E. Degree Examination, Dec.2018/Jan.2019
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 following :
   - i)   Skills necessary for a programmer
   - ii)   Interactive mode
   - iii)   Short circuit evaluation of expression
   - iv)   Modulus operator   **(04 Marks)**

    b.   Mention three types of errors encountered in python programs. Explain the basic building block of python with an example python program to display format number ($F_n = 2^{2n} + 1$) for a 'n' value promoted by the users.   **(08 Marks)**

    c.   Describe python language support for arithmetic operators. Write a python programs to calculate student result based on 2 exam, 1 sport event and 3 activities conducted in a college with weightage of the activity = 20% and sports = 20% for 50 marks.   **(04 Marks)**

OR

2   a.   List and give syntax of all python supported conditional statements along with its usage with an example program to check whether given number is positive or negative or zero.   **(08 Marks)**

    b.   Differentiate between argument and parameter. Illustrate the flow of execution of a python function with an example program to convert given Celsius to Fahrenheit temperature.   **(08 Marks)**

Module-2

3   a.   Explain while and for loop write a program to generate Fibonacci series up to the given limit by defining FIBONACCI (n) function.   **(08 Marks)**

    b.   Mention the advantages of continue statement. Write a program to compute only even numbers sum within the given natural number using continue statement.   **(08 Marks)**

OR

4   a.   Define a string. How it can be traversed though using looping statement? Write a python program to display presence of given substring in main string.   **(08 Marks)**

    b.   How computational fault or computational errors are handled in python? Show it with an example python program to copy all lines beginning with vowels from FROM.text file to VOWELTEXT.text file retaining other lines.   **(08 Marks)**

Module-3

5   a.   Describe any two list operations and list methods. Write a python program to accept 'n' numbers from user, find sum all even numbers and product of all odd numbers in entered list.   **(08 Marks)**

    b.   List merits of dictionary over list. Write a python program to accept USN and marks obtained, find maximum, minimum and students USN who have scored in the range 100-85, 85-75, 75-60 and below 60 marks separately.   **(08 Marks)**

OR

6 a. Compare and contrast tuples with lists. Explain the following operations in tuples
    i)   Sum of two tuples
    ii)   Slicing operators
    iii) Compression of two tuples
    iv)   Assignments to variables.   **(08 Marks)**

   b. Explain extracting data using regular expressions. Implement a python program to find for lines having '@' sign between characters in a read text file.   **(08 Marks)**

Module-4

7 a. How class can be instantiated in python? Write a python program to express instances as return values to define a class RECTANGLE with members width, height, corner_x, corner_y and member function : to find centre, area and perimeter of a rectangle.   **(08 Marks)**

   b. Explain init and str method with an example python program.   **(08 Marks)**

OR

8 a. Define polymorphism. Demonstrate polymorphism with function to find histogram to count the numbers of times each letters appears in a word and in sentence.   **(08 Marks)**

   b. What is a pure function? Write a python program to find duration of event if start and end time is given by defining class TIME.   **(08 Marks)**

Module-5

9 a. Explain any 2 socket functions. Explain support for parsing HTML using regular expression with an example program.   **(08 Marks)**

   b. Describe a support of security mechanism employed in Internet application with support of API usage with an example program to get four strings and put them in "hidden.PY".
                                                                        (08 Marks)

OR

10 a. Write a note on XML. Design python program to retrieve a node present in XML tree.
                                                                        (08 Marks)

   b. Brief on structured Query language, with suitable python program explain functions involved in creation of database table in python.   **(08 Marks)**

* * * * *