USN |__|__|__|__|__|__|__|__|__|__| **18CS55**

Fifth Semester B.E. Degree Examination, June/July 2024
Application Development using Python

Time: 3 hrs.   Max. Marks: 100

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

Module-1

1 a. List the salient features of python programming language.   **(06 Marks)**
   b. Write a python program to find the area of sphere and volume of cube. Print the results. Take input from user.   **(06 Marks)**
   c. List and explain the syntax of all flow control statements with example.   **(08 Marks)**

OR

2 a. What is a function? How to define a function in python? Write a program using function to find out the given number is prime or not.   **(06 Marks)**
   b. What is local and global scope of variable in python? Explain the different scenarios with an example snippet.   **(08 Marks)**
   c. What is Exception Handling? How exceptions are handled in python? Write a python program with exception handling code to solve divide-by-zero error situation.   **(06 Marks)**

Module-2

3 a. What is list? Explain the concept of slicing and indexing with proper examples. **(06 Marks)**
   b. What is Tuple? How it is different from list? Write a program to count the number of occurrences of character in a string.   **(06 Marks)**
   c. What is Dictionary in Python? How it is different from list and tuples? Write a program to create, update and display the dictionary items.   **(08 Marks)**

OR

4 a. List out five useful string methods. Explain with an example code for each method.
                                                                                   (10 Marks)
   b. Compare copy.copy( ) and copy.deepcopy( ) functions with suitable examples for each.
                                                                                   (05 Marks)
   c. Write a python program that accepts a sentence and find the number of words, digits, characters, uppercase letters and lowercase letters.   **(05 Marks)**

Module-3

5 a. List and explain shorthand code for common character classes. Illustrate how do you define your own character class.   **(07 Marks)**
   b. Explain the usage of caret and dollor sign characters in regular expression.   **(06 Marks)**
   c. Write a python program to extract phone numbers and email addresses using regex.
                                                                                   (07 Marks)

OR

6 a. What are the Ray properties of a file? Explain in detail file reading/writing process with an example of python program.   **(07 Marks)**
   b. Explain briefly what are the different methods of file operations support in python shutil module.   **(07 Marks)**
   c. Write a python program to create a folder PYTHON and under the hierarchy 3 files file1, file2 and file3. Write the content in file1 as "XXX" and in file 2 as "YYY" and file 3 content should be by opening and merge of file1 and file2. Check out necessary condition before writing file3.   **(06 Marks)**

Module-4

7   a. Define classes and objects in python. Create a class called employee and initialize it with employee id and name. Design methods to:
    i)   SetAge – to assign age to employee.
    ii) SetSalary – to assign salary to the employee.
    iii) Display – to display all information of the employee.   **(08 Marks)**
    b. Illustrate the concept of modifier with python code.   **(05 Marks)**
    c. Explain _ _init_ _ and _ _str_ _ method with an example python program.   **(07 Marks)**

OR

8   a. Define Polymorphism. Demonstrate polymorphism with function to find histogram to count the number of times each letter appears in a word and in a sentence.   **(07 Marks)**
    b. Illustrate the concept of pure function with python code.   **(06 Marks)**
    c. Define class diagram. Discuss the need for representing class relationships using class diagram with suitable example.   **(07 Marks)**

Module-5

9   a. How do we download a file and save it to hard drive using request module?   **(06 Marks)**
    b. Write a python program to give search keyword from command line arguments and open the browser tab for each result page.   **(06 Marks)**
    c. Explain Selenium's web drive methods for finding elements.   **(08 Marks)**

OR

10 a. Write a program that takes a number N from command line and creates an N × 100 multiplication table in excel spread sheet.   **(08 Marks)**
    b. Write short notes on:
        Creating, copying and rotating pages with respect to pdf.   **(06 Marks)**
    c. Write a program that find all CSV files in the current working directory, read in the full contents of each file, write out the contents, skipping the first line, to a new CSV file.   **(06 Marks)**

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