USN | | | | | | | | | | **18CS752**

Seventh Semester B.E. Degree Examination, Dec.2024/Jan.2025
Python Application Programming

Time: 3 hrs.   Max. Marks: 100

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

Module-1

1 a. Explain the computer Hardware architecture with a neat diagram. **(06 Marks)**
   b. Explain types of error with examples. **(06 Marks)**
   c. Differentiate between argument and parameter. Write a program which prompt the user for a Celsius temperature, convert the temperature to Fahrenheit and print out the converted temperature. **(08 Marks)**

OR

2 a. Write Python programs to,
      (i)   Find the largest of three numbers.
      (ii) Calculate the area of square and rectangle. **(08 Marks)**
   b. Explain the conversion functions and Math functions in Python with examples. **(08 Marks)**
   c. Explain chained conditional statement with example. **(04 Marks)**

Module-2

3 a. What is a string? Write a Python program to demonstrate traversal through a string with a loop. Explain the string slicing operator with example. **(08 Marks)**
   b. Explain the working of for Loop and While loop in Python with suitable example. **(06 Marks)**
   c. List any six methods associated with strings and explain each of them with an example. **(06 Marks)**

OR

4 a. Explain file open, file read and file write concept in python with example. **(06 Marks)**
   b. Write a python program to count the number of occurrences of a given word in a file. **(06 Marks)**
   c. Explain the working of definite loops in Python. What is the need for break and continue statements. **(08 Marks)**

Module-3

5 a. What is a List? Explain list slicing and list traversing with examples. **(06 Marks)**
   b. Explain POP and remove methods on lists. Illustrate how to delete more than one element from a list. **(06 Marks)**
   c. Why do you need replace expression in Python? Explain search ( ) and findall ( ) functions with examples. **(08 Marks)**

OR

6 a. How tuples are created in Python? Explain tuple assignment with examples. **(06 Marks)**
  b. What is dictionary? Differentiate between List and Dictionary? **(08 Marks)**
  c. Write a Python code that implement and returns the histogram for the string 'abracadabra' using dictionaries. Write a function print_list to print the keys and their values in alphabetical order from the values returned by the histogram function. **(06 Marks)**

Module-4

7 a. Define class and object. Explain classes and objects in Python in detail with suitable examples. **(08 Marks)**
  b. Explain init and str methods with example. **(06 Marks)**
  c. Illustrate the concept of pure function with python code. **(06 Marks)**

OR

8 a. Explain polymorphism in python with examples. **(08 Marks)**
  b. Explain the concept of modifier with python code. **(06 Marks)**
  c. Write a note on operator overloading with an example. **(06 Marks)**

Module-5

9 a. What is Service Oriented Architecture? List the advantages of the same. **(06 Marks)**
  b. What is XML? Design Python program to retrieve a node present in XML tree. **(06 Marks)**
  c. Write a Python code to read a file from web using urllib and retrieve the data of the file. Also compute the frequency of each word in the file. **(08 Marks)**

OR

10 a. Describe creation of databasetable using database cursor architecture. **(08 Marks)**
   b. Explain key in database model. **(06 Marks)**
   c. What is JSON? Explain Parsing JSON. **(06 Marks)**

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