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15CS664

Sixth Semester B.E. Degree Examination, July/August 2021 Python Application Programming

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions.

1.
 - a. Compare and contrast compiler and interpreter. (04 Marks)
 - b. Explain the hardware architecture of computer with a neat sketch. (06 Marks)
 - c. Write a python program to find arithmetic operations (+, -, *, / and %) of two numbers using functions by getting two numbers through key board. (06 Marks)

2.
 - a. Explain conditional execution in python (if..., if... else, if elifelse) with examples. (06 Marks)
 - b. Explain floor division (//), modulo division (%) and division (/) with examples. (04 Marks)
 - c. Find the greatest of three numbers (without using and operator) by getting 3 numbers through keyboards using function. (06 Marks)

3.
 - a. Elucidate the role of secondary memory with a neat sketch. (04 Marks)
 - b. Explain the different exceptions in python and write syntaxes to handle them. (06 Marks)
 - c. Write a python program to count number of the occurrences of a word in a text file. (06 Marks)

4.
 - a. Explain string data structure in Python for indexing the element of string (both positive and negative indexing) for the string "Hello" with different string slicing operations. (05 Marks)
 - b. Elucidate different file handling functions in python with examples. (05 Marks)
 - c. Write a Python program for handling divide by zero exception using try and except. (06 Marks)

5.
 - a. Describe mutable and immutable objects with examples. (04 Marks)
 - b. How will you perform the following operations in the List – L = ['d', 'a', 'c', 'b']
 - To add the element 'e' in L
 - To delete the element 'c' from L
 - To join another List L1 = ['x', 'y', 'z'] with L. (06 Marks)
 - c. Discuss the lists handling functions in python with example. (06 Marks)

6.
 - a. How to swap the values of two variables using a single statement in python. (02 Marks)
 - b. Explain search () and findall () in Regular expression with examples. (08 Marks)
 - c. Write a python program to read a list of words from a string and sort them and print in the order of longest to shortest words. (06 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

- 7 a. Define operator overloading. (02 Marks)
b. Elucidate the initialization of method with an example. (08 Marks)
c. Write an operator overloading program in python to set the values (3, 4) and (5, 7) into the point P₁ and P₂ respectively and perform P₁ + P₂ where + denotes addition of respective X and Y coordinates i.e (x₁ + x₂, y₁ + y₂). (06 Marks)
- 8 a. Implement the concept of pure function with an example. (08 Marks)
b. Write a python program to create class Employee which has a parameterized constructor initializing name, salary and a method Display () for displaying name and salary of the employees. Invoke the constructor with the data of 'Zara' and 2000 and 'Sam' and 3000 and display them through Display () is main. (08 Marks)
- 9 a. Describe service oriented Architecture with a neat sketch. (08 Marks)
b. Write a python program to make SQLite connection with database called music.sqlite and insert two records of singer_Id and singer_name and display them on console. (08 Marks)
- 10 a. Write a python program to delete a particular record singer_Id = 100 from the database mentioned in Q9(b) and update the record singer_Id = 101 with singer_name = 'vijay'. (08 Marks)
b. Develop a world simplest web browser which makes a connection to a web server and follows rules of the HTTP protocol to request a document and display what the server sends back using python program. (08 Marks)

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