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18CS752

Seventh Semester B.E. Degree Examination, July/August 2022 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. List and explain the salient features of Python. (05 Marks)
- b. Explain the Computer hardware architecture with a neat diagram. (10 Marks)
- c. Write a Python program that prompts the user for a Celsius temperature, convert the temperature to Fahrenheit and print out the converted temperature. (05 Marks)

OR

- 2 a. Write a Python program to find largest of three numbers. (06 Marks)
- b. Write a python program to prompt the user for a number to find the following :
i) a number is even or odd ii) a number is positive or negative. (06 Marks)
- c. Explain the syntax of user defined functions in python. Write a user defined function to find sum of three numbers. (08 Marks)

Module-2

- 3 a. Give the syntax and flow chart of while loop. (06 Marks)
- b. Write a python program to check whether the given number is palindrome or not. (08 Marks)
- c. For given string S = 'PYTHON', find the output for the following :
i) S[0 : len(s)] ii) S[:] iii) S[0 : 3]
iv) S[-4 : -1] v) S[-4 :] vi) S[-4 : 4]. (06 Marks)

OR

- 4 a. Discuss the read mode and write mode on files. Write a python program to read and write to a file. (10 Marks)
- b. Write a python program to count number of lines in the given file. (06 Marks)
- c. List and explain any four methods associated with strings. (04 Marks)

Module-3

- 5 a. Define List. Write a python program for the following : i) Accessing list elements
ii) Adding new values to list iii) Deleting list element. (12 Marks)
- b. Define Dictionary. Discuss any four operations associated with dictionaries. (08 Marks)

OR

- 6 a. Discuss how to create a tuple and compare tuple elements with an example. (08 Marks)
- b. Demonstrate how to use tuples as keys in dictionaries. (06 Marks)
- c. Write a python program that uses regular expression to search for lines that start with From and have an at sign. (06 Marks)

Module-4

- 7 a. How classes and attributes in python are associated? Give examples. (06 Marks)
- b. Discuss Pure functions and Modifiers with an example. (08 Marks)
- c. Are objects are mutable? Justify. (06 Marks)

OR

- 8 a. Write a function called print_line that takes a time objet and prints it in the form of
hour : minute : second. (06 Marks)
- b. Discuss Operator overloading with a suitable example. (06 Marks)
- c. Demonstrate the concept of inheritance with a class diagram. (08 Marks)

Module-5

- 9 a. Define Protocol. Write a python program that makes a connection to a web server and follows the rules of HTTP protocol to request a plain text document and display what server sends back. (10 Marks)
- b. Define XML. Write a python code for passing and extracting data elements from the XML. (10 Marks)

OR

- 10 a. What is Service – Oriented Architecture? List out the advantages of SOA. (06 Marks)
- b. Discuss various keys available in a database model. (06 Marks)
- c. Discuss the four basic SQL commands needed to create and maintain data. (08 Marks)

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