

CBCS SCHEME

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15CS664

Sixth Semester B.E. Degree Examination, Feb./Mar. 2022 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. With neat diagram explain the computer hardware architecture. (08 Marks)
b. What is a program? Explain the building blocks of programs. (08 Marks)

OR

- 2 a. What is the need for rules of precedence? Mention the rules of precedence in Python. Solve the expression $3/2 * 4 + 3 + (10/4)**3 - 2$ (08 Marks)
b. Explain the three type conversion functions in Python with suitable examples. (05 Marks)
c. Write user defined function to read a number and display a message to indicate whether it is positive or negative. (03 Marks)

Module-2

- 3 a. With suitable examples explain the usage of break and continue in loops. (06 Marks)
b. Write a code segment in Python to find the largest value in a list and display the largest value. (04 Marks)
c. Write a code segment to reverse a string and check if it is palindrome. (Without using string methods except len()). (06 Marks)

OR

- 4 a. Write a python code segment to read an input string and display the count of vowels and consonants in the input string. (06 Marks)
b. With examples, explain any five string methods. (10 Marks)

Module-3

- 5 a. What is list in Python? With suitable examples explain traversing a list and displaying elements of a list. (05 Marks)
b. With suitable examples explain the list methods append, extend, sort and pop. (08 Marks)
c. What is a dictionary in Python? Explain the use of IN operator in dictionary. (03 Marks)

OR

- 6 a. Write a code segment in Python to read a string and count the number of times each alphabet appears in the string using dictionary. Also indicate the output of the code segment. (08 Marks)
b. Write a python code segment to open a file and search for a regular expression that starts with 'F' followed by two characters and followed by 'm:' (05 Marks)
c. Explain Tuples with suitable examples. (03 Marks)

Module-4

- 7 a. Define a class for rectangle and write a function called area-rectangle that takes a rectangle object as argument and calculates the area. Explain the code segment. (08 Marks)
b. With examples explain Pure functions and modifiers. (08 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.

OR

- 8 a. Define a class named Appointment and define a function in that class that display appointment details such as title, date, time. (04 Marks)
- b. Explain the need for INIT method. Demonstrate the use of init method for a class Time. (06 Marks)
- c. Explain __str__ method & operator overloading with examples. (06 Marks)

Module-5

- 9 a. What is socket? Write and explain a program in python, that connects to web server, requests a document, and display what the server sends back. (08 Marks)
- b. Write a program to retrieve data text file on web and compute the frequency of each word in file. (08 Marks)

OR

- 10 a. What is XML? Explain the process of parsing XML using a tree representation. (08 Marks)
- b. What is a cursor? What is need for cursor when accessing databases? (02 Marks)
- c. With appropriate code segments in Python using sqlite, explain table creation, insertion, fetching and deletion. (06 Marks)
