

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)

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)
