CBCS SCHEME

USN | 4 | V | P | 1 | 9 | C | S | 0 | 6 | 3 | 18CS55

Fifth Semester B.E. Degree Examination, Feb./Mar. 2022
Application Development using Python

Time: 3 hrs. Max. Marks: 100

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

Module-1

1 a. Write a Python program to calculate the area and circumference of a circle Input the value of radius and print the results. **(06 Marks)**

b. Explain with example code snippets, different syntax of range( ) function in Python. **(06 Marks)**

c. Discuss local and global scope of variables in Python. Illustrate different scenarios, with an example. **(08 Marks)**

OR

2 a. Demonstrate the use of break and continue keywords using a code snippet. **(06 Marks)**

b. List and define the use of comparison operators in Python. Write the output for the following expression in Python:
i) 2 * * 3 ii) 20% 6 iii) 20//6 **(06 Marks)**

c. What is user defined function? Write a function to check if a given number is a prime or not. **(08 Marks)**

Module-2

3 a. What is a List? Explain the methods that are used to delete items from the list. **(08 Marks)**

b. Write a program to take a sentence as input and display the longest word in the given sentence. **(06 Marks)**

c. How is the dictionary different from list? Assume a dictionary containing city and population as key and value respectively. Write a program to traverse the dictionary and display most populous city. **(06 Marks)**

OR

4 a. Explain the following string methods with example:
i) join( ) ii) islower( ) iii) strip( ) iv) center( ). **(08 Marks)**

b. Write a program to create a list of number and display the count of even and odd numbers in the list. **(06 Marks)**

c. If S = 'Hello World', explain and write the output of the following statements:
i) S[1:5] ii) S[:5] iii) S[3: - 1] iv) S[:] **(06 Marks)**

Module-3

5 a. What is a regular expression? Explain the process of finding patterns of text with regular expressions and associated methods in Python with an example. **(08 Marks)**

b. Explain the following patterns matching capabilities in python with suitable program snippets:
i) Grouping with parentheses
ii) Matching multiple groups
iii) Matching one or more. **(06 Marks)**

c. Explain the following file operations in Python with suitable examples:
i) Copying files and folders
ii) Moving files and folders
iii) Permanently deleting files and folders. **(06 Marks)**

OR

6 a. Explain with a suitable Python program how findall( ) is different from search( ) method. State the purpose of any four short hand character classes with examples. **(08 Marks)**

b. What is the difference between OS and OS.path modules? Discuss the following four methods of OS module:
i) chdir( ) ii) walk( ) iii) listdir( ) iv) getcwd( ) **(06 Marks)**

c. With code snippets, explain reading, extracting and creating ZIP files in Python. **(06 Marks)**

Module-4

7 a. What is class? How do we define class? How to instantiate the class and members are accessed? **(08 Marks)**

b. Write a Python program to add and multiply two complex number objects using operator overloading concepts. **(06 Marks)**

c. Discuss type-based dispatch in a Python. **(06 Marks)**

OR

8 a. Explain _ _init_ _ and _ _str_ _ methods, with an example. **(08 Marks)**

b. What is pure function? Illustrate the same with an example. **(06 Marks)**

c. Explain concept of polymorphism with suitable example. **(06 Marks)**

Module-5

9 a. What is Web Scraping? Explain the process of downloading the file from web and saving downloaded files. **(08 Marks)**

b. Explain the process of reading cells from EXCEL sheets. **(06 Marks)**

c. With a code snippet, discuss how to change the text style of .doc file using paragraph and run objects. **(06 Marks)**

OR

10 a. How do we extract, decrypt, copy and encrypt PDF files in Python. **(08 Marks)**

b. Discuss the process of creating a beautiful soup object and finding an element from HTML. **(06 Marks)**

c. With an example, illustrate the use of JASON module in Python. **(06 Marks)**

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