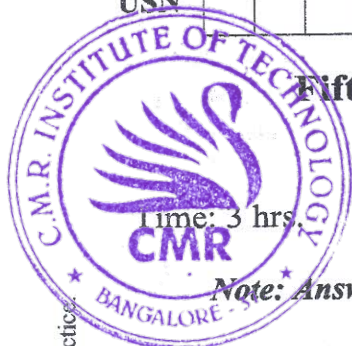


CBCS SCHEME

18CS55

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Fifth Semester B.E. Degree Examination, Jan./Feb. 2023 Application Development using Python

Max. Marks: 100

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

Module-1

- List the salient features of python programming language. (04 Marks)
 - Explain the math operators in python from highest to lowest precedence with an example for each. Show steps to evaluate $(5 - 1) * (7 + 1) (3 - 1)$ in python. (08 Marks)
 - Write a program to find the sum of all odd and even numbers of n elements. Here skip the numbers which are divisible by 3. (08 Marks)

OR

- Give one example for each of the operation below in python language:
 - String concatenation and replication. (10 Marks)
 - Read input and display. (10 Marks)
 - Explain:
 - Def statements with parameters. (10 Marks)
 - Return values and return statements with an example. (10 Marks)

Module-2

- Discuss the different ways of traversing a list. Explain each with an example. (10 Marks)
 - Write a python program that allows a player to guess a secret number within 6 chances. The code that lets the player enter a guess and checks that guess is right or not by printing appropriate message. List of numbers are taken as an input from the user. (07 Marks)
 - Write a program to demonstrate the use of pretty function. (03 Marks)

OR

- Compare list and dictionary data structures with respect to python language. (04 Marks)
 - Write a program in python that counts the number of occurrences of each letter in a string. Display the results in column fashion. (08 Marks)
 - Write the string method syntax in python to perform below operations:
 - Removing white space characters from beginning, end or both sides of a string. (08 Marks)
 - To right-justify, left-justify and center a string. (08 Marks)

Module-3

- List out the different character classes. Give representation, regular expression symbols, example and meanings for each character class. (10 Marks)
 - Describe the following with suitable python code snippet:
 - Greedy and Non Greedy pattern matching. (10 Marks)
 - Findall() method of RegeX object. (10 Marks)

OR

- 6 a. Write a python program to rename the filename contains American style dates (MM - DD - YYYY) to European style dates (DD - MM - YYYY) in the working directory. (10 Marks)
- b. What are Assertions in python? Explain with an example. (05 Marks)
- c. Explain the file reading and writing process with suitable python program. (05 Marks)

Module-4

- 7 a. How objects are mutable by nature justify with an example? (04 Marks)
- b. Discuss the methods `isinstance()` and `hasattr()` with suitable example for each. (06 Marks)
- c. What is operator over loading? Write a program to add two point objects by overloading + operator. Also, overload - str - () to display point as an ordered pair. (10 Marks)

OR

- 8 a. Define Inheritance. Explain with an example. (06 Marks)
- b. Briefly discuss the importance of `- -init- -()` and `- -str- -()` methods in python. (04 Marks)
- c. Demonstrate the polymorphism to generate histogram to count the number of times each letter appears in word and in sentence. (10 Marks)

Module-5

- 9 a. Analyze the steps involved in downloading and saving web page on to local system along with program. (06 Marks)
- b. List any 4 CSS selectors of bs4 module. Using Beautiful soup passel, retrieve all of the paragraph tags in the web page www.amazon.com. (06 Marks)
- c. How selenium module is useful to deal with web pages. What methods do it uses to simulate mouse clicks and keyboard keys? (08 Marks)

OR

- 10 a. Write a program to read the census data from the excel spreadsheet, count the number of census tracts in each country, count the total population of each country and prints the results.

1	Census tract	State	County	POP2010
9841	06075010500	CA	SanFrancisco	2685
9842	06075010600	CA	SanFrancisco	3894
9843	06075010700	CA	SanFrancisco	5592

- b. How to zip the files and folders. Demonstrate with one example. (04 Marks)
- c. Write a script that will go through every PDF in a folder and encrypt the PDFs using a password provided on the command line. Save each encrypted PDF with an-encrypted pdf suffix added to the original filename. (08 Marks)
