Degree: B.Tech   Semester: II
END-SEMESTER EXAMINATION, APRIL-MAY, 2024

Course Title: COMPUTER PROGRAMING
Course Code: FCCS0102

Duration: 03 Hours

Max.Marks: 50

Note: - Attempt all questions. Missing data/information (if any), maybe suitably assumed & mentioned in the answer.

Q. No.	Question	Marks	CO
Q 1	**Attempt any 2 parts of the following**		
1a	Explain the difference between a set and a tuple. Write a program to create a set consisting of names of students. Search if a particular name entered by the user is present in the set or not. Display appropriate messages.	5	CO1
1b	Write a program to find largest of 4 integers using if-else.	5	CO1
1c	Write a function to check if duplicate values exist in a dictionary. If yes, display all the duplicate values.	5	CO1
Q 2	**Attempt any 2 parts of the following**		
2a	What is inheritance? Explain method overriding with the help of an example.	5	CO2
2b	What is the significance of 'self' parameter in the __init__() function. Can we define a class without __init()__ function. Justify your answer with suitable example.	5	CO2
2c	Define a class 'Shop' that stores information about products in the shop. Create object of the class to call the methods of the class. The class should contain the following data members. • name- Name of the Product • selPrice-Selling price of the product • costPrice- Cost price of the Product The class should support the following methods. • _init_() for initializing data members. • Profit() which calculates the profit • Display() to display the selling price, cost price and the profit	5	CO2
Q 3	**Attempt any 2 parts of the following**		
3a	With the help of regular expression, write a function to find sequences of one upper case letter followed by lower case letters.	5	CO3

3b	Using Numpy library, create two 1-D arrays of size 10: Arr1, and Arr2. Find the sum of the first half of both the arrays and product of the second half of both the arrays.	5	CO3
3c	Using Pandas library, create the following dataframe: Name Age Marks A Hina 23 72 B Tina 20 87 C Mina 19 45 D Lina 16 90 Display the details at index value B and C.	5	CO3
Q 4	**Attempt any 2 parts of the following**		
4a	Write a program to read the content from a text file "Hello.txt". Count the total number of words in the file and display each word on a separate line. Example: If the file contains the following content: This room is big. We are going there. The expected output: Total number of words: 8 This room is big we are going there	5	CO4
4b	What is the difference between 'w' , 'a' and 'x' modes in file handling.	5	CO4
4c	Why exception handling is necessary. Write a program to demonstrate the use of multiple 'try' blocks in a single program?	5	CO4
Q 5	**Attempt any 2 parts of the following**		

5a	Write short notes on:
	  (i) Input tag with all its attributes
	  (ii) Difference between 'get' and 'post'
		5	CO5

5b	Write a program to create a bar graph using matplotlib library for the following data: No. of students: 56, 78, 65,48 Average Marks: 60, 70, 80, 90 Label the axis as given.	5	CO5
5c	Create HTML form for a Grocery store that sells two items A and B. The data entry operator needs to enter the following fields: Customer Name, Cost of Item A, Cost of Item B. Additionally, the form should have a submit button named "Generate Invoice". Once the Data Entry Operator clicks the "Generate Invoice" button, the Invoice should be generated on the screen as follows (using flask): The amount of item A is Rs. 2000 The amount of item B is Rs. 3000 The total amount is Rs. 5000 Retrieve HTML form data using Flask by showing appropriate URL routing.	5	CO5

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