21EC643

USN

Sixth Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025
Python Programming

Time: 3 hrs.   Max. Marks: 100

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

Module-1

1   a.   Explain for loop with respect to the range function with the help of an example.   **(08 Marks)**
    b.   List out the boolean and comparison operators with their functions.   **(07 Marks)**
    c.   Write a program to accept only the integer from the user and to classify the accepted input as even or odd number. Include try and except for input validation.   **(05 Marks)**

OR

2   a.   List any three built-in functions. Explain the definition and function call of the user defined functions along with parameter and return statements with example.   **(08 Marks)**
    b.   List out the rules to be followed while creating the variables. Explain the significance of global statement with an example.   **(07 Marks)**
    c.   Write a program to find the factorial of a number using function.   **(05 Marks)**

Module-2

3   a.   Explain the following with respect to lists with an example for each:
         (i) Negative indexing   (ii) Slicing
         (iii) Concatenation   (iv) Replication   **(08 Marks)**
    b.   Explain the following dictionary methods with an example:
         (i) keys( ), values( ), items( )
         (ii) get( )
         (iii) setdefault( )   **(07 Marks)**
    c.   Write a program using lists to store N numbers accepted from the user and to display the list average.   **(05 Marks)**

OR

4   a.   Explain any four list methods with an example for each.   **(08 Marks)**
    b.   Explain all the is X string methods with an example for each.   **(07 Marks)**
    c.   Write a program to create a dictionary of 10 items (USN: Marks) pairs by accepting the inputs from the user. Display the item with the maximum and minimum marks.   **(05 Marks)**

Module-3

5   a.   List out the steps involved in matching a regular expression.   **(08 Marks)**
    b.   With the help of an example explain the variable saving process with shelve module.   **(07 Marks)**
    c.   Write a program to find te total size of all the files in a directory.   **(05 Marks)**

OR

6   a.   Briefly explain character classes in Regular expression module.   **(08 Marks)**
    b.   Explain the methods related to the absolute and relative paths.   **(07 Marks)**
    c.   Write a program to search for lines having '@' sign between characters in a read text file.   **(05 Marks)**

Module-4

7 a. Explain pure and modifier functions with an example for each. **(08 Marks)**
b. Explain operator overloading with an example. **(07 Marks)**
c. Write a program that uses class to store the name and marks of students. Use list to store the marks in 3 subjects. **(05 Marks)**

OR

8 a. Explain classes, objects and attributes with an example. Show that objects ate mutable with the help of a snippet. **(08 Marks)**
b. Explain _ _ init _ _ and _ _ str _ _ methods with an example. **(07 Marks)**
c. Write a program to create two objects of the class point with x and y coordinates as attributes. Pass these two objects to a function which computes and displays the distance between the two points. **(05 Marks)**

Module-5

9 a. Explain HTML parsing using Beautiful-Soap with the help of an example. **(08 Marks)**
b. Explain XML parsing with the help of an example. **(07 Marks)**
c. Write a program to retrieve a text document from the web using urllib. **(05 Marks)**

OR

10 a. Explain JSON parsing with the help of an example. **(08 Marks)**
b. Explain the creation of a database table with the help of an example. **(07 Marks)**
c. Briefly explain the three kinds of keys used in database model. **(05 Marks)**

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