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| **B.Tech. DEGREE**  **LAB ASSESSMENT**  **OCT– 2022: I YEAR – TERM 1**  **CSE 120: Python Programming**  *(Common to B.Tech. CSE - AI & ML, CyS & IoT, AI & DA, B.Tech. - CS & MED Engg.,)*  **Duration: 1 hour – 30 minutes Maximum Mark: 15 Date:27/10/2022**  **Time : 10.30 A.M – 12.00 P.M** |
| **Instruction to candidates:**   1. *Use an A4 sheet to answer the questions* 2. *Candidates should write the correct question number for the answered questions* 3. *Write the output for all the questions*   **COURSE OUTCOMES**   |  |  | | --- | --- | | CO3 | Implement and analyse the concept of modular programming and error handling in python. | | CO4 | Design the program models using Object-Oriented Programming concepts such as encapsulation, inheritance and polymorphism as used in Python. | | CO5 | Identify and implement the various string manipulate operations using regular expressions. |   **Answer ALL the questions**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **1.** | What is an exception? Write a python programming to demonstrate the following exception   1. ZeroDivisionError 2. Index out of range Exception 3. Invalid data type | [3] | CO3 | [K2] | | **2**. | Create a triangleclass in Python language, allowing you to build a triangle with **length** and **breadth** attributes. And perform the following operations   1. Create a **Perimeter()** method to calculate the perimeter of the triangle and an **Area()**method to calculate the area of ​​the triangle. 2. Create a method **display()** that displays the length, breadth, perimeter, and area of an object created using an instantiation on the triangle class. 3. Create a **cuboid** child class **inheriting** from the **triangle class** with a **length, height and breadth** attribute and another **volume ()** method to calculate the volume of the **cuboid.** | [6] | CO4 | [K3] | | **3.** | Mr Kim joined as an analyst in Cooper’s company, he was assigned the following task. Help him by writing the code in python using the “regular expression” package   1. Write a Python program to find all words starting with 'c' or 'e' in a given string.   text = "The following example creates an ArrayList with a capacity of 50 elements. Four elements are then added to the ArrayList and the ArrayList is trimmed accordingly."   1. Write a Python program to abbreviate ‘Cyber’as 'Cy.' in a given string. 2. Extract the words starting with ‘e’ and ending with ‘e’ 3. Pluralize the word “cap” using regular expression 4. Extract the mail ID from the given one.txt file   One.txt  Hello Welcome to SRET, Please send your feedback to [sret@sriramachandra.edu.in](mailto:sret@sriramachandra.edu.in). for course query contact [manager@sret.edu.in](mailto:manager@sret.edu.in) | [6] | CO5 | [K3] | |