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Birla Vishvakarma Mahavidyalaya (Engineering College)
(An Autonomous Institution)
Fourth Year, B.Tech. (Information Technology)
End Semester Examination, Winter – 2023 (AY 2023-24)

Course Code: 4IT01	**Course Title: Python Programming**
Date: 29.11.2023	**Time: 11:00 am to 01:30 pm** **Maximum Marks: 60**

Instructions:
- Each section must be written in a separate answer book.
- Numbers written in the square brackets to the right indicate maximum marks.
- The text just below marks indicates the Course Outcome Nos. (CO) followed by the Bloom's taxonomy level of the question, i.e., R: Remember, U: Understand, A: Apply, N: Analyze,   E: Evaluate, C: Create

Section – I

Q. 1 (A) Write a python program that accepts person name and age (age must be positive (write code of it)) store it in to the file. The program output should display whether the person is eligible for voting (Age must be greater than 18 for eligibility) and Display length of person's name.   [05] 3E

     (B) Differentiate following: [05] 1,2U
     I) function overloading and constructor overloading
     II) Static function and Pure function

Q. 2 (A) Write a python program to create a file for storing details of the Books (Book id, Author and price) and use lambda function to extract details of Books having price greater than 500.   [05] 3E

     (B) Explain user-defined modules in python with an example.   [05] 2A

OR

     (B) Explain concept of function with variable arguments with example.   [05] 1,3A

Q. 3 (A) Explain try. except…else … with the help of user defined function divide(x, y) which raises an error when the denominator is zero while dividing x by y and displays the message like "division by zero!" otherwise else block will be executed with result of x/y.   [05] 3E

     (B) Explain multiple inheritance with example.   [05] 3U

OR

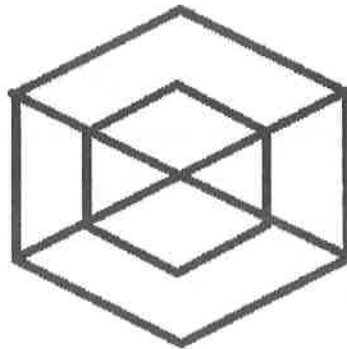   (B) Explain following functions with example: map(), filter(), reduce().   [05] 2U

Section – II

Q. 4 (A) Explain types of implementing thread in python and write a program to reverse a string by extending thread class. [5] 3A

(B) Explain the use of generator with example. [5] 3A

Q. 5 (A) Explain the use of following: [5] 4U
Doc string, wild card character, raw string, use of (?) in regex, re.X

(B) Write a python program to do addition of numpy array using class. [5] 6A

OR

(B) Write a python program to do matrix multiplication of numpy array using class. [5] 6A

Q. 6 (A) Write down a step to create turtle and draw following design using turtle commands [5] 5C

(B) Explain the use of all geometric manager of tkinter with example. [5] 5N

OR

(B) Write a step to create tkinter and write a python program to create restaurant billing system using tkinter(take one dropdown widget, one list box widget, one text box widget, one button widget and one label widget for final total of bill) [5] 5C