

**VIT**Vellore Institute of Technology
(Deemed to be University under section 3 of U.G. Act, 1956)**School of Computer Science and Engineering****Winter Semester 2023-24****Continuous Assessment Test – 1****SLOT : A2+TA2****Programme Name & Branch : B.Tech - Computer Science & Engineering & Business Systems****Course Name & code: Programming in Python & CBS1011****Class Number (s): VL2023240503608, VL2023240503619****Faculty Name (s): Dr.S.Sudha, Dr.A.Anny Leema****Exam Duration: 90 Min.****Maximum Marks: 50****Answer All the Questions**

Q.No	Question	Max Marks
1	a Evaluate the given python expression and display the result. print(2 * 3 / 4 + 4 / 4 + 8 - 2 + 5 / 8)	5
	b Briefly describe the data types in Python	5
2	Write a python program to check whether a number can be expressed as a sum of two prime numbers. For example if the number is 40 then 3+37=40, where 3 and 37 are prime numbers, 11+29=40 where 11 and 29 are prime numbers and 17+23=40 where prime number where 17 and 23 are prime numbers. So the list of pair of prime numbers are 3 37, 11 29 , 17 23.	10
3	a Write the usage of break , continue and pass statements with an appropriate example	3
	b The Centre of examination has decided to add some bonus marks to the students based on their performance in online learning and declare the results. Perform the mark assessment for 5 students using For Loop. The mark assessment procedure as follows: A bonus of 8 percent of the scored marks was given if the student scored ≥ 50 percent in online learning and 10 percent of marks if they scored ≥ 80 percent and above. But the maximum marks should be 100. The mark scored should be greater than or equal to zero otherwise as 'Invalid Input'. Declare the result with marks and 'pass' or 'fail' by considering the marks less than 50 as fail	7

4	a. Predict the output of the following Python code. <pre> a=[1,2,3,4,5,6,7,8,9] print(a[::2]) a[::2]=10,20,30,40,50 print(a) </pre>	2
	b. <code>keys = {'Mumbai','Bangalore','Chennai','Coimbatore'}</code> <code>dictionary = dict.fromkeys(keys)</code> <code>print(dictionary)</code> <code>dictionary=dict.fromkeys(keys,'India')</code> <code>print(dictionary)</code>	2
	c. <code>state_tuple = ("Goa", "Kerala", "Punjab", "Delhi", "Karnataka", "Gujarat", "Tamilnadu")</code> <code>print(state_tuple[-4:-2])</code> <code>print(state_tuple[:-2])</code> <code>print(state_tuple[-4:])</code>	3
	d. <code>x = {"maths", "science", "english", "physics"}</code> <code>y = {"science", "english", "physics"}</code> <code>x.difference_update(y)</code> <code>print(x)</code> <code>x.intersection_update(y)</code> <code>print(x)</code> <code>x.remove('science')</code> <code>print(x)</code>	3
5	Given a List, write an algorithm and the subsequent Python program to perform cyclic right shift of the array by 'm' places. For example, if the elements are 12, 13, 16, 7, 10 and m =2 then the resultant set will be 7, 10, 12, 13, 16.	10