VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY (VSSUT), ODISHA
Even Mid Semester Examination for Academic Session 2024-25

COURSE NAME: B.Tech	SEMESTER:4th
BRANCH NAME: Electrical Engineering	
SUBJECT NAME: Programming In Python	
FULL MARKS: 30	TIME: 90 Minutes

Answer **All** Questions.
The figures in the right hand margin indicate Marks. *Symbols carry usual meaning.*

Q1.		Answer all Questions.	[2 × 3]
	a)	Explain the term garbage collection in Python programming and also mentioned the advantage of garbage collection.	
	b)	Write a program to generate 10 random numbers between 1 to 100.	
	c)	Write the difference between Tuple, List, Set and dictionary with proper example.	
Q2.			[4+4]
	a)	Mentioned the various type of conditional branching statement supported by Python Language with proper syntax and flow chart.	
	b)	Write a program to enter the marks of a student in four subjects. Then calculate the total and aggregate, and display the grade obtained by student. If the student scores an aggregate greater than 75%, then the grade is distinction. If aggregate is $60 \geq and < 75$, then the grade is first division. If aggregate is $50 \geq and < 60$, then the grade is second division. If aggregate is $40 \geq and < 50$, then the grade is third division else the grade is fail.	
		OR	[3+3+2]
	a)	What is type conversion? Explain the need for type conversion with the help of relevant example.	
	b)	Momentum is calculated as $e = mc^2$ where m is the mass of the object and c is its velocity. Write a program that accept an object's mass (in kilograms) and velocity (in meters per second) and displays its velocity.	
	c)	Find out the output and also mentioned the comment line in the below comment. $n1 = 9$ $n2 = n1 + 5$ $n2 = int(str(n2) + "4")$ $print(n2)$	
Q3.			[2+6]
	a)	With the help of an example explain how can concatenate a string and a floating point data.	
	b)	If str = 'welcome to the world of Python Programming', answer the following (i) write an instruction to print 'world of Python' (ii) Write an instruction to print 'Python Programming' using negative indexes. (iii) Write an instruction that print the index of the first occurrence of	

		the letter 'o' in the string.	
		OR	[2+3+3]
		a) Python strings are immutable. Justify the statement. b) Write a program to reverse a string. c) Find the error and also rectify it. str='abcdefgh' str[5]='a' print(str) str='Python' print(str)	
Q4.			[4+4]
			[8]
		a) With proper example explain how List can be used as a stack. b) Write a program that creates a list of numbers from 1-50 that is either divisible by 3 or divisible by 6.	
		OR	[3+5]
		a) Differentiate between remove(),pop() and discard() methods of set. b) Write a program to find intersection, union and symmetric difference between two sets.	