NAVRACHANA UNIVERSITY
a UGC recognized University

School:	School of Engineering and Technology
Program/s:	Computer Science & Engineering
Year: 1st	**Semester:** 2nd
Examination:	End Semester Examination
Examination year:	May - 2023

Course Code: CS193	**Course Name:** Problem Solving using Python		
Date: 18/05/2023		**Total Marks:**	40
Time: 2:00 pm to 4:00 pm		**Total Pages:**	4

Instructions:

➔ *Write each answer on a new page.*
➔ *Preferably, write the answers in sequential order.*

Q. No.	Details	Marks	COs'	BTL#
Q.1	**Multiple Choice Questions - All are compulsory (1 Mark for each)**	10		
	1. Which function is used for assigning an index to each item of the iterable object? a) Enumerate ( ) b) Index ( ) c) Insert ( ) d) Extend ( )		CO1	BT1
	2. If the programmer wants two independent lists, he should not go for _____. a) Cloning b) Copying c) Aliasing d) Cloning or Copying		CO1	BT1, BT2
	3. The strftime ( ) method is defined under the class: a) Date b) Datetime c) Time d) All the mentioned classes		CO4	BT1
	4. What will be the output of the following code snippet? print(2**3 + (5 + 6)**(1 + 1)) a) 129 b) 8 c) 121 d) None of the mentioned		CO2, CO3	BT4 BT5
	5. Which of the following is the proper syntax to check if a particular element is present in a list? a) if ele in list b) if not ele not in list c) Both the mentioned syntax d) None of the mentioned		CO2	BT4
	6. As what datatype are the *args stored, when passed into a function? a) List b) Tuple c) Dictionary d) None of the mentioned		CO1	BT1
	7. Which of the following statements is correct for variable names in Python language?		CO1	BT1

		a) All variable names must begin with an underscore. b) Unlimited length c) The variable name length is a maximum of 2. d) All of the above				

	8.	Which of the following is not a flow control statement in Python?
		   a) if
		   b) for
		   c) while
		   d) give
				CO1,
				CO3
					BT1	

	9.	What is the output of the following code?
		   x = "hello"
		   print(x.upper( ))
		   a) Hello
		   b) hello
		   c) HELLO
		   d) None of the above
				CO4	BT4,
					BT5	

	10.	Which of the following is NOT a data type in Python?
		   a) float
		   b) boolean
		   c) string
		   d) array
				CO1	BT1	

Q.2	**Find out the output / Error Checking: All are compulsory.** **(1 Mark + 2 Marks)**		3			

	1. What will be the output of the following code?
	   set1 = {1, 3, 5}
	   set2 = {2, 4, 6}
	   print(len(set1 + set2))
				CO2,
				CO4
					BT4,
					BT5,
					BT6	

	2. Observe the following Python code very carefully and rewrite the code in python after removing all error(s). Underline each correction done in the code.
	
	   N = int(input("Enter any number:"))
	   S = 0
	   for i in range (1, N, 2)
	      s+=1
	      if i%2=0:
	      print("i" * 2)
	      else:
	         print("i" * 3)
	         print[S]
			CO2,
			CO3,
			CO4
				BT2,
				BT4,
				BT5,
				BT6	

Q.3	**Short Answer Type Questions - Attempt any 4 questions.** **(3 Marks for each)**		12			
	1. What is local and global scope of variable in python. Explain the different scenarios with an example. How can you force a variable in a function to refer to the global variable?			CO1	BT1	
	2. What is a lambda function? Explain with an example.			CO3	BT1	
	3. List out atleast three useful string methods which supports in python. Explain each of them with example.			CO1, CO2, CO3	BT1, BT6	
	4. Explain the difference between a list and a tuple in Python.			CO1	BT1, BT2	
	5. What is Dictionary? Explain Python dictionaries in detail discussing its operations and methods.			CO1, CO3	BT1, BT2, BT6	
	6. What is the difference between a for loop and a while loop in Python? Give an example of each.			CO1, CO2, CO4	BT1, BT5, BT6	
Q.4	**Long Answer Type Questions - Attempt any 3 questions.**		15			

(5 Marks for each)

1. Write a recursive python function to calculate the factorial of a number.	CO2, CO4	BT4, BT6

2. Write a Program to Prompt for a Score between 0.0 and 1.0. If the Score is out of range, print an error. If the score is between 0.0 and 1.0, print a grade using the following table:

Score	Grade
>=0.9	A
>=0.8	B
>=0.7	C
>=0.6	D
<0.6	F

(CO2, CO4 — BT4, BT5, BT6)

3. Explain the methods of List data type in Python for the following operations with suitable code example for each.
   a) Adding values to a list
   b) Removing values from a list
   c) Finding a value in a list
   d) Sorting the values in a list
   e) Aliasing

(CO1, CO3, CO4 — BT1, BT3, BT6)

4. Write a Python program to find all the prime numbers between 0 and 100.

(CO4 — BT5, BT6)

5. Write short note on importing the array module in python with an example.

(CO1, CO3 — BT1, BT6)

************End of Question Paper************