Name: Student University Roll No.:	Printed Pages:

School of Engineering

Second Sessional Examination, Even Semester (AS: 2023-24)

B. Tech: CS(1A-1J) Year: 1st Semester: II

Course Title: Programming Concepts with Python Course Code: NCS4201	Max Marks: 60 Time: 3hrs

Instructions if any: Read the question Carefully.

	SECTION 'A' Q.N.1. Attempt all parts of the following:	Course Objective	Marks
a)	What are the elements of python?	CO1	1
b)	Create an empty dictionary.	CO2	1
c)	Write the output of the given code: X=18 assert X>20,"Hello I am executing"	CO2	1
d)	What do you mean by Python IDLE.	CO1	1
e)	Explain the import statement with example.	CO3	1
f)	Write a program to implement union of two different sets.	CO2	1
g)	Define Lambda Function with example.	CO3	1
h)	Discuss file and its type.	CO4	1

	SECTION 'B' Q.N.2. Attempt any two parts of the following:	Course Objective	Marks
a)	Explain Sieve of Eratosthenes Algorithm also Write a program to implement given algorithm.	CO3	6
b)	Explain the Break, Continue & Pass statement with suitable example.	CO2	6
c)	What is Function? Discuss different ways of Argument/Parameter passing Methods in Function.	CO3	6
d)	What is module? Write a program to implement User-defined module.	CO3	6

	SECTION 'C' Q.N.3. Attempt any two parts of the following:	Course Objective	Marks
a)	What is String? Perform concatenation, repetition, slicing, and split the string on the basis of space.	CO2	5
b)	What is Polymorphism? Explain with example.	CO4	5
c)	What are the Identity and Membership operators discuss with example?	CO2	5

	Q.N.4. Attempt any two parts of the following:		
a)	Write a program to print the given pattern: 1 4 9 16 25 1 4 9 16 25 1 4 9 16 1 4 9 1 4 1	CO2	5
b)	Explain Python Programming Cycle with diagram.	CO1	5
c)	What is Inheritance? Also explain its types.	CO4	5

	Q.N.5. Attempt any two parts of the following:		
a)	What are the different modes of opening a file? Write program to read the first 30 contents of 2nd line.	CO4	5
b)	Write a program to calculate factorial of a given Number, using function.	CO3	5
c)	Discuss Object Oriented Programming Concept.	CO4	5

	Q.N.6. Attempt any two parts of the following:		
a)	What is Abstract Data type? Discuss with example.	CO3	5
b)	Explain how to create a dictionary in python & perform four operations in dictionary.	CO2	5
c)	Discuss the __init__ function in detail with example.	CO4	5

Table 1: Mapping between COs and questions

(Number of COs may vary from course to course)

COs	Questions Numbers	Total Marks
CO1	1(a),1(d),4(b)	07
CO2	1(b),1(c),1(f),2(b),3(b),3(c),4(a),6(b)	29
CO3	1(g),2(a),2(c),2(d),5(b),6(a)	30
CO4	1(h),3(b),4(c),5(a),5(c),6(c)	26