	Name: Student University Roll No.:	Printed Pages:2
	School of Engineering Second Sessional Examination, Even Semester (AS: 2022-23) B. Tech: CSE Year: 1st Semester: 2nd	
	Course Title: DataVisualization with python Course Code: ITBC3201	Max Marks: 60 Time: 3*hrs*

Instructions: Read the question Carefully.

SECTION 'A' Q.N.1. Attempt all parts of the following:		Course Objective	Marks
a)	Who is the founder of python ?	CO1	1
b)	What is data visualization in python ?	CO2	1
c)	What will be output of following code: print(2**3 + 18)	CO1	1
d)	What is pass keyword in python?	CO1	1
e)	How to write a dictionary in python ?	CO1	1
f)	Explain comment in python ?	CO1	1
g)	Define statistics	CO3	1
h)	How to install package in python	CO1	1

SECTION 'B' Q.N.2. Attempt any two parts of the following:		Course Objective	Marks
a)	What is if , elif and else in python ?	CO2	6
b)	Explain covariance and correlation in detail .	CO3	6
c)	Heights and initials of a group of individuals are provided below. Create a bar plot titled "Height Comparison" to compare the heights among this group height = [179, 155, 191, 152, 188, 177] names = ['QA', 'WB', 'EC', 'RD', 'TE', 'YF']	CO3	6
d)	What is the difference between list and tuple in python?	CO2	6

SECTION 'C'		Course Objective	Marks

Q.N.3. Attempt any two parts of the following:			
a)	What is the difference between DataFrame and Series ?	CO4	5
b)	Explain mean ,median and mode with formula	CO2	5
c)	Write a while loop to print your name 100 times ?	CO2	5
Q.N.4. Attempt any two parts of the following:			
a)	What are the different list methods in python ?	CO1	5
b)	How to create new column in pandas explain with an example ?	CO4	5
c)	How to create user defined function in python ?	CO3	5
Q.N.5. Attempt any two parts of the following:			
a)	What is slicing in python ,explain start , stop and step in detail ?	CO1	5
b)	Create a line plot using the x and y values provided below. Label the y-axis as "Y" and label the x-axis as "X" x = [3, 4, 5, 6] y = [1.5, 2, 2.5, 3]	CO2	5
c)	How to create subplots in python explain with an example ?	CO2	5
Q.N.6. Attempt any two parts of the following:			
a)	Explain groupby in pandas with example.	CO4	5
b)	What is box plot and its use case ?	CO2	5
c)	What do you mean by Normal distribution ,draw and explain ?	CO3	5

Table 1: Mapping between COs and questions

(Number of COs may vary from course to course)

COs	Questions Numbers	Total Marks
CO1	Q1(a,c,d,e,f,h),Q3(c),Q4(a),Q5(a)	21
CO2	Q1(b), Q3(b), Q5(b,c), Q6(b) Q2(a,d)	33
CO3	Q1 (g) ,Q2(b,c) Q4(c) ,Q6(c)	23
CO4	Q3 (a) Q4) (b) Q6 (a)	15