

## End Semester Examination (2021-22)-Odd Semester

**BCA (Artificial Intelligence / Data Science) –I Year (I Sem)**

**B.Sc IT (Artificial Intelligence / Data Science) – I Year (I Sem)**

**Course Name: Python with Clean Coding**

**Code: BCS1006**

**Time: 02 Hours**

**Max Marks: 60**

University Roll No.

(To be filled by the

Student)

### Note: Please read instructions carefully:

- The question paper has 03 sections and it is compulsory to attempt all sections.
- All questions of Section A are compulsory; questions in Section B and C contain choice.

<b>Section A: Very Short Answer type Questions</b>		<b>BL</b>	<b>CLO</b>	<b>Marks (10)</b>
<b>Attempt all the questions.</b>				
1.	Explain the term “Machine Learning” and its importance in real world.	BL2	CLO4	02
2.	Using pandas library a csv file can be imported . illustrate about csv file and how to import it using pandas.	BL3	CLO3	02
3.	Illustrate the methods that returns the first and last 10 rows of a DataFrame.	BL3	CLO3	02
4.	Discuss the need of a tuple with appropriate python example.	BL2	CLO2	02
5.	Explain the range function in python with example.	BL2	CLO2	02
<b>Section B: Short Answer Type Questions</b>		<b>BL</b>	<b>CLO</b>	<b>Marks (30)</b>
<b>Attempt any 03 out of 06 questions.</b>				
1.	Python is an attractive language for rapidly developing any short of application. Define the above statement by explaining some of the applications of Python.	BL1	CLO1	10
2.	Explain the use of function in python with appropriate example.	BL2	CLO2	10
3.	Build a Program to check if first and last number of a tuple is the same.	BL3	CLO2	10
4.	Distinguish between scatter plot and bar graph in python with suitable examples.	BL2	CLO3	10
5.	Build a program to print multiplication table of a given number entered by user.	BL3	CLO2	10
6.	Build a python program to print sum of first 10 natural numbers using while loop.	BL3	CLO2	10

<b>Section C: Long Answer Type Questions/Case Study</b> <b>Attempt any 01 out of 04 questions.</b>		<b>BL</b>	<b>CLO</b>	<b>Marks (20)</b>
1.	Explain List in Python and perform the following- Given two number of List. Construct a Program to create a new list such that the new list should contain odd number from the first list and even number from the second list.	BL3	CLO2	20
2.	Construct an outer function that will accept two parameters, a and b <ul style="list-style-type: none"> <li>• Create an inner function inside an outer function that will calculate the multiplication and addition of a and b</li> <li>• At last, an outer function will add 10 into addition and return it</li> </ul>	BL3	CLO2	20
3.	Construct a DataFrame in python with a shape of 7 rows and 5 columns and apply the following methods- <ol style="list-style-type: none"> <li>1. shape()</li> <li>2. size()</li> <li>3. head(3)</li> </ol>	BL3	CLO3	20
4	Considering the concepts of OOPS in python programming language demonstrate and analyze the relationship between Class and Objects with appropriate real life example.	BL4	CLO1	20

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