

CBCS SCHEME - Make-Up Exam

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BDS306B

Third Semester B.E/B.Tech. Degree Examination, June/July 2025

Python Programming for Data Science

Max. Marks: 100



- Notes:**
1. Answer any FIVE full questions, choosing ONE full question from each module.
 2. M : Marks , L: Bloom's level , C: Course outcomes.

Module – 1			M	L	C
1	a.	Explain block structure of Python with an example.	6	L1	CO1
	b.	Define tokens. Explain various types of tokens used in python.	6	L1	CO1
	c.	Develop a python program to illustrate working of all arithmetic operators.	8	L2	CO1
OR					
2	a.	Explain importance of data types in python. Explain briefly on the three sequence data types.	6	L1	CO1
	b.	Illustrate formatting print statement in python.	6	L1	CO1
	c.	Develop a python script to determine whether a given number is even or odd without using any branching constructs.	8	L2	CO1
Module – 2					
3	a.	Explain the working of if-elif and nested-if statements with its syntax and an example each.	6	L1	CO2
	b.	Extend the various ways in which 'for' loop construct can be used in python.	6	L1	CO2
	c.	Develop a python script to print Fibonacci series of 'n' terms.	8	L2	CO2
OR					
4	a.	Outline the significance of 'break', 'continue' and 'pass' statements in python scripts.	6	L1	CO2
	b.	Describe python built-in functions.	6	L1	CO2
	c.	Develop python code to determine whether the given number is palindrome or not.	8	L2	CO2
Module – 3					
5	a.	Explain creating a list and its indexing and slicing methods.	6	L1	CO3
	b.	Define Tuples. Explain various operations performed on a tuple.	6	L1	CO3
	c.	Illustrate append, Insert and Extend operations in the list with an example.	8	L2	CO3
OR					
6	a.	Explain adding and deleting of elements in a set with the help of examples.	6	L1	CO3
	b.	Define dictionary. Illustrate various methods used in removing the elements of a dictionary.	6	L1	CO3
	c.	Illustrate accessing an element from nested dictionary.	8	L2	CO3

Module – 4					
7	a.	Explain array manipulation using Numpy library.	6	L1	CO4
	b.	Develop python program to read Numpy Array and Print row (sum, mean) column (deviation, standard deviation)	8	L2	CO4
	c.	Explain reading and writing array data on files using Numpy library.	6	L1	CO4
OR					
8	a.	Explain concept of Indexing, Slicing and Iterating using Numpy library.	6	L1	CO4
	b.	Explain internal structure of DataFrame. With suitable example, explain how Pandas allows to make transactions between a DataFrame and a series.	8	L2	CO4
	c.	Outline the working of three types of re-indexing methods in Pandas.	6	L1	CO4
Module – 5					
9	a.	Develop a python program to read a HTML file with basic tags and construct a dictionary and display in console.	8	L2	CO5
	b.	Explain reading and writing data on Microsoft Excel files.	8	L1	CO5
	c.	Illustrate “Split ()” and “Strip ()” functions for manipulation of strings.	4	L1	CO5
OR					
10	a.	Develop a python program to read a CSV file and print the contents in the console window.	8	L2	CO5
	b.	Explain how Pandas library exploit mapping to perform some operations.	8	L1	CO5
	c.	Illustrate how “GroupBy” supports the operation of an iteration.	4	L1	CO5
