

# CBCS SCHEME



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BDS306B

**Third Semester B.E./B.Tech. Degree Examination, June/July 2024**

## Python Programming for Data Science

Time: 3 hrs.

Max. Marks: 100

*Note: 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
Q.1	a.	Explain the basic elements of python language with examples.	08	L2	CO1
	b.	Classify the basic data types in python language with examples.	08	L2	CO1
	c.	Define logical operators with an example.	04	L1	CO1
<b>OR</b>					
Q.2	a.	Describe the block structure of Python with an neat diagram.	06	L2	CO1
	b.	Discuss about Python operators precedences with an example.	08	L2	CO1
	c.	Give comparison between input and output statements in Python language.	06	L1	CO1
<b>Module - 2</b>					
Q.3	a.	Define forming condition.	04	L1	CO2
	b.	Discuss the Python built-in-functions for looping.	06	L2	CO2
	c.	Write a program for finding a given alphabet is vowels or not, using if-else condition.	10	L2	CO2
<b>OR</b>					
Q.4	a.	Describe the looping statements in Python with an example.	10	L2	CO2
	b.	Explain the Jumping statements such as break, continue and pass in python language with an example.	10	L2	CO2
<b>Module - 3</b>					
Q.5	a.	Define list and properties of list.	04	L1	CO3
	b.	Explain about set and operations in set, in Python.	08	L2	CO3
	c.	Explain the dictionary and Basic operations in dictionary of Python language.	08	L2	CO3
<b>OR</b>					
Q.6	a.	Define tuple, Syntax of creating, indexing and string tuple in Python.	08	L1	CO3
	b.	Write a python program for printing four fruits with their variety and calorie content using nested dictionary.	08	L3	CO3
	c.	Explain between pop() and popitem() methods in Python.	04	L2	CO3
<b>Module - 4</b>					
Q.7	a.	Explain indexing, slicing and iterating of nd array in Python with an example.	10	L2	CO4
	b.	Discuss in detail about Pandas data structure.	10	L2	CO5
<b>OR</b>					
Q.8	a.	Discuss the arithmetic operation of numpy in Python and write a program using all arithmetic expressions.	10	L2	CO4
	b.	Explain the following : (i) np.sqrt()                      (ii) frame.apply()                      (iii) describe() (iv) ser.order()                      (v) ser.rank()	10	L2	CO4
<b>Module - 5</b>					
Q.9	a.	Write a program to read and print in console CSV file.	10	L3	CO5
	b.	Explain about data manipulation in Pandas	10	L2	CO5
<b>OR</b>					
Q.10	a.	Discuss in detail about reading and writing HTML files and Microsoft excel files.	10	L2	CO5
	b.	Explain about JSON data and HDF5.	10	L2	CO5

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