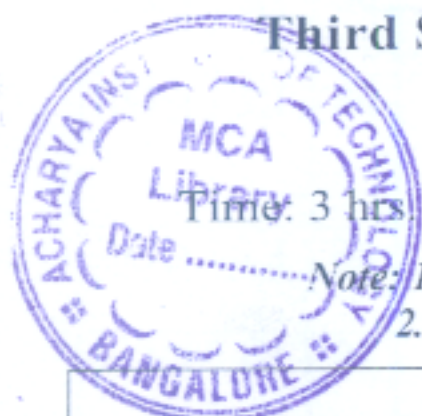


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Third Semester B.E./B.Tech. Degree Examination, June/July 2025
Python Programming for Data Science

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.	List the salient features of Python programming language.	06	L1	CO1
	b.	Demonstrate with example print(), input() and string replication.	06	L2	CO1
	c.	Develop Python program to calculate the : (i) Area of circle (ii) Area of rectangle (iii) Area of triangle	08	L3	CO1
OR					
Q.2	a.	Infer various methods of importing modules in Python Program. Explain.	06	L2	CO1
	b.	Develop a Python program to read n digit integer numbers and separate the integer number and display each digit.	08	L3	CO1
	c.	Explain local and global scope variable for each.	06	L2	CO1
Module – 2					
Q.3	a.	Explain flow control statement with suitable program and flow chart.	06	L2	CO2
	b.	Develop a Python program to add 'n' number accepted from the user.	06	L3	CO2
	c.	How you can prevent program from crashing? Infer different ways to avoid crashing.	08	L1	CO2
OR					
Q.4	a.	Develop a Python script to display a multiplication table for given integer.	08	L3	CO2
	b.	Write short notes on short circuit evaluation performed by Python when evaluating combined comparison.	06	L1	CO2
	c.	Summarize the usage of keywords 'end' and 'sep'.	06	L2	CO2
Module – 3					
Q.5	a.	Discuss list and dictionary data structure with example for each.	08	L1	CO3
	b.	Develop a program using nested for loop to represent right triangle of the character 'T' T TT TTT TTTT	08	L3	CO3
	c.	Summarize indexing and slicing of operations in lists.	04	L2	CO3

OR

Q.6	a.	Demonstrate any four built-in methods of dictionary.	06	L2	CO3
	b.	Explain the following methods of list: i) append(v) ii) extend(v) iii) insert(i,v) iv) reverse(v)	08	L2	CO3
	c.	Write a python program to search elements using binary search.	06	L1	CO3

Module – 4

Q.7	a.	Define data structures? Explain any two data structures in Pandas in detail.	10	L1	CO4
	b.	Explain basic operation on NumPy arrays. Explain any two.	10	L2	CO4

OR

Q.8	a.	Develop Python program to read NumPy array and print row (sum, mean, std) and column (sum, mean, std).	10	L3	CO4
	b.	Illustrate ndarray with an example program for creating array indexing.	10	L2	CO4

Module – 5

Q.9	a.	How to work with pdf document in Python. Explain with extracting text, decrypting, creating, copying pages, encrypting pdfs.	10	L1	CO5
	b.	What is CSV and JSON files? Explain with an example program the usage of JSON module in Python.	10	L1	CO5

OR

Q.10	a.	What is Web Scraping? How to download files from web, check the error and save the downloaded files to hard drive with request module in Python.	06	L1	CO5
	b.	Explain in details, how to parse HTML with BeautifulSoup.	07	L2	CO5
	c.	How to work with excel spreadsheet in Python. Explain briefly.	07	L3	CO5

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