



B.E/B.TECH DEGREE EXAMINATIONS: APRIL / MAY 2023

Regulation 2018

Fourth Semester

COMMON TO ALL BRANCHES

U18MAR0202 : Python Programming

COURSE OUTCOMES

CO1: Solving problems using the data structures in python programming

CO2: Handling data for data pre-processing

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

(Answer not more than 40 words)

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|--|-----|-------------------|
| 1. List out the key features of python. | CO1 | [K ₁] |
| 2. How python handles multiple assignment of values? | CO1 | [K ₁] |
| 3. Compare break and continue statement. | CO1 | [K ₂] |
| 4. Write the python code to read first 10 characters of a file and print it. | CO1 | [K ₁] |
| 5. Interpret the use of filter() and map() in Python. | CO1 | [K ₂] |
| 6. Define list comprehension. | CO1 | [K ₁] |
| 7. How are NumPy arrays better than Python's lists? | CO2 | [K ₁] |
| 8. What are ndarrays in NumPy? | CO2 | [K ₁] |
| 9. Recall the pass statement. | CO1 | [K ₁] |
| 10. What is series in pandas? | CO2 | [K ₁] |

Answer any FIVE Questions:-

PART B (5 x 16 = 80 Marks)

(Answer not more than 400 words)

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|--|----|-----|-------------------|
| 11. a) Create a list that reads car names such as “verna, scross, accord, Mahindra, Honda, Hundai, Swift, dzire”. Perform the following: | 12 | CO1 | [K ₃] |
| <ul style="list-style-type: none"> • Change the value verna to ciaz. • Change all the elements to uppercase • Remove the last element • Find index position of ‘accord’ • Add one element in last • Print the Length of the list | | | |

	b)	Compare interactive mode and script mode.	4	CO1	[K ₂]
12.	a)	Explain the concepts of LEGB rule in Python.	8	CO1	[K ₁]
	b)	Discuss the different types of arguments used in python program.	8	CO1	[K ₂]
13.	a)	Mr. Shan wants to write a NumPy program to compute the factor of a given array by Singular Value Decomposition.	8	CO2	[K ₃]
	b)	Write a program to convert a string element to uppercase, lowercase, capitalize the first letter, title-case and swap case of a given NumPy array.	8	CO2	[K ₃]
14.	a)	Mr. John wants to create a text file “sample.txt” contains alphanumeric text. Write a program that reads this text file and writes to another file “example.txt” entire file except the numbers or digits in the file.	12	CO1	[K ₃]
	b)	Compare and Contrast list, tuple and array.	4	CO1	[K ₂]
15.	a)	Mr. John wants to write a Pandas program to read the diamonds DataFrame and detect duplicate color with respective output. Note: duplicated () function returns boolean Series denoting duplicate rows, optionally only considering certain columns.	10	CO2	[K ₃]
	b)	List out the significant features of the pandas Library.	6	CO2	[K ₁]
16.	a)	In real-world data, tuples with missing values and noisy values for some attributes are a common occurrence. Describe various methods for handling this problem.	10	CO2	[K ₂]
	b)	How do convert Pandas DataFrame to a NumPy array?	6	CO2	[K ₁]
