Department of Computer Science and Engineering

B. Tech. Mid Question Bank (R22 Regulation)

Academic Year: 2024   **Semester: III**

Subject Name: Programming with Python

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PART-A

Q.No	Questions	Marks	BL	CO	Unit No
1	State any four applications of python.	2	L1	CO1	1
2	State the identifier rules in python.	2	L1	CO1	1
3	How would you determine whether any element is present in a given sequence?	2	L2	CO1	1
4	List the Conditional statements in Python.	2	L2	CO1	1
5	Write a python program to print the prime numbers between 1 to 100.	2	L2	CO1	1
6	Give an example to show the advantage of using else statement with for loop.	2	L2	CO1	1
7	List out the ways of importing the array module.	2	L1	CO2	2
8	How would you determine length of an array and size of each element in an array ?	2	L3	CO2	2
9	How to find size and shape of the numpy array?	2	L2	CO2	2
10	Write a python program to accept a string and display each word and its length.	2	L2	CO2	2
11	Differentiate Del, remove and pop on Python Arrays.	2	L2	CO2	2
12	Write a python program to find the largest and second largest element in an array.	2	L1	CO2	2
13	Write an example to show passing of variable length arguments to a function.	2	L2	CO3	3
14	Create a list using range() in python?	2	L3	CO3	3
15	Give an example to show the usage of List Comprehension.	2	L2	CO3	3
16	What is Tuple Packing and Unpacking.	2	L1	CO3	3
17	Illustrate the use of Anonymous function in Python.	2	L1	CO3	3
18	Write a code to sort dictionaries using a key.	2	L1	CO3	3
19	List File attributes in Python.	2	L1	CO4	4
20	List various ways of importing a module.	2	L1	CO4	4
21	Name some common exceptions in python.	2	L1	CO4	4
22	How do you handle the exception inside a program when you try to open a non-existent file.	2	L3	CO4	4
23	Explain the purpose of the raise statement in Python.	2	L2	CO4	4
24	Write an example to show the purpose of finally block.	2	L2	CO4	4
25	How is the constructor method defined in Python?	2	L1	CO5	5
26	Give the syntax of multilevel inheritance.	2	L2	CO5	5
27	Which metacharacter in regular expression matches any character other than the newline character.	2	L1	CO5	5

28	Write the method which returns the name of the thread in threading module.	2	L2	CO5	5
29	What is the purpose of the self keyword in methods?	2	L2	CO5	5
30	How do you implement abstract classes and methods in Python?	2	L2	CO5	5s

PART-B

Q.No	Questions	Marks	BL	CO	Unit No
1	List and explain different arithmetic operators supported by Python. Discuss about their precedence and associativity.	4	L2	CO1	1
2	Write a Python program to compute distance between two points in a 2- dimensional coordinate system.	4	L2	CO1	1
3	Explain in detail about python type conversion.	4	L2	CO1	1
4	Write a program to calculate the total amount to be paid by the user after reducing the 10% discount on purchase more than 1000 rupees.	4	L3	CO1	1
5	Explain about the following Decision control Statements. i)if-else ii)nested if-else iii)if-elif-else	4	L2	CO1	1
6	Illustrate the usage of while loop in python. Write a python program to find sum of n natural numbers using while loop.	4	L2	CO1	1
7	Explain in detail about the looping statement in Python with suitable examples.	8	L2	CO1	1
8	Discuss the number data types in Python and Detail the methods to convert from one number system to other.	8	L2	CO1	1
9	Discuss the following methods a) Type b) round c) isinstance() d) divmod	8	L1	CO1	1
10	Demonstrate the following array operations with suitable examples. i) Remove ii) index iii) count	4	L2	CO2	2
11	Write a Python program that removes all duplicate elements from an array and returns a new array.	4	L2	CO2	2
12	Discuss about creating numpy arrays and their operations.	4	L2	CO2	2
13	Write a python program to compute addition, multiplication of matrices using numpy.	4	L2	CO2	2
14	Explain about different string operations using suitable python program.	4	L2	CO2	2
15	Explain the importance of reshaping and flattening a numpy array with suitable example.	4	L3	CO2	2
16	Demonstrate Array methods with suitable examples.	8	L2	CO2	2
17	Discuss various string handling methods with suitable examples.	8	L2	CO2	2
18	Differentiate between Arrays and Lists with suitable examples.	8	L2	CO2	2

19	Define what is a function? Explain about Function declaration, definition and function call in Python.	4	L2	CO3	3
20	Discuss the following with suitable example? i) Lambda function ii) Map function iii) Reduce function	4	L2	CO3	3
21	Describe about List Comprehension. Write a python program to find even numbers in a list using List Comprehension?	4	L2	CO3	3
22	1.Discuss the following dictionary methods a)fromkeys() b) setdefault() c) update()	4	L3	CO3	3
23	Demonstrate with an example to sort Dictionary Items.	4	L2	CO3	3
24	Write about Tuple methods with examples.	4	L2	CO3	3
25	Demonstrate seek() and tell() methods in file handling with an example.	4	L2	CO4	4
26	Write a short note on different methods to read data from a file.	4	L2	CO4	4
27	Explain Picking and unpicking with the help of an example.	4	L2	CO4	4
28	Discuss any three common exceptions in Python with examples.	4	L2	CO4	4
29	Develop a Python program to implement single try block with multiple except blocks and trace the code for its execution?	4	L2	CO4	4
30	Explain the purpose of 'else' and 'finally' blocks in exception handling with a python program.	4	L2	CO4	4
31	Discuss various directory methods in OS module.	8	L2	CO4	4
32	Explain the utility of Assert and Raise keywords. Show how to handle various exceptions with examples.	8	L3	CO4	4
33	How can you create your own exceptions in Python? Write a program to print the square root of a number, raise an exception if number is negative.	8	L3	CO4	4
34	With the help of an example demonstrate multilevel inheritance and multiple inheritance.	4	L2	CO5	5
35	Illustrate about init() method with the help of an example.	4	L2	CO5	5
36	With the help of an example explain data encapsulation in python class.	4	L2	CO5	5
37	Differentiate between re.search() and re.match() in regular expressions.	4	L3	CO5	5

38	Discuss the following metacharacters a) \w b) \s c) \A d) ? e) {m}	4	L3	CO5	5
39	Define the term multithreading. Give its advantages.	4	L2	CO5	5
40	Write short notes on abstract class. Differentiate between abstract class and interfaces.	8	L3	CO5	5
41	Discuss re.Ignorecase and re.mutliline flags in regular expressions. Write a python program to check that a string contains only a certain set of characters. (in this case a-z, A-Z and 0-9)	8	L3	CO5	5
42	Explain creating a thread using threading module.	8	L3	CO5	5