CBCS SCHEME

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BPLCK105B/BPLCKB105

First Semester B.E./B.Tech. Degree Examination, Jan./Feb. 2023
Introduction to Python Programming

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.	What is the need for role of precedence? Illustrate the rules of precedence in Python with example.	6	L2	CO1
	b.	Explain the local and global scope with suitable examples.	6	L2	CO1
	c.	Develop a program to generate Fibonacci sequence of length (N). Read N from the console.	8	L3	CO1
		OR			
Q.2	a.	What are functions? Explain Python function with parameters and return statements.	7	L2	CO1
	b.	Define exception handling. How exceptions are handled in python? Write a program to solve divide by zero exception.	7	L2	CO1
	c.	Develop a python program to calculate the area of rectangle and triangle print the result.	6	L3	CO1
		Module – 2			
Q.3	a.	Explain negative indexing, slicing, index( ), append( ), remove( ), pop( ), insert( ) and sort( ) with suitable example.	8	L2	CO2
	b.	Explain the use of in and not in operators in list with suitable examples.	6	L2	CO2
	c.	Develop a program to find mean, variance and standard deviation.	6	L3	CO2
		OR			
Q.4	a.	Explain the following methods in lists with an examples: i) len( ) ii) sum( ) iii) max( ) iv) min( ).	8	L2	CO2
	b.	Explain set( ) and setdefault( ) method in a dictionary.	6	L2	CO2
	c.	Develop a Python program to swap cases of a given string input: Java output: jAVA.	6	L3	CO2
		Module – 3			
Q.5	a.	Explain join( ) and split( ) method with examples.	8	L2	CO3
	b.	Explain with examples: i) isalpha( ) ii) isalnum( ) iii) isspace( ).	6	L2	CO3
	c.	Develop a python code to determine whether the given string is a palindrome or not a palindrome.	6	L3	CO3

		OR			
Q.6	**a.**	Explain the concept of file handling. Also explain reading and writing process with suitable example.	**8**	**L2**	**CO3**
	b.	Explain the concept of file path. Also discuss absolute and relative file path.	**6**	**L2**	**CO3**
	c.	Briefly explain saving variables with shelve module.	**6**	**L3**	**CO3**
		Module – 4			
Q.7	**a.**	Explain the following file operations in Python with suitable example: i) Copying files and folders ii) Moving files and folders iii) Permanently deleting files and folders.	**6**	**L2**	**CO3**
	b.	List out the benefits of compressing file? Also explain reading of a zip file with an example.	**8**	**L2**	**CO3**
	c.	List out the differences between shutil.copy( ) and shutil.copytree( ) method.	**6**	**L3**	**CO3**
		OR			
Q.8	**a.**	Briefly explain assertions and raising a exception.	**6**	**L2**	**CO3**
	b.	List out the benefits of using logging module with an example.	**6**	**L2**	**CO3**
	c.	Develop a program with a function named DivExp which takes two parameters a, b and returns a value C (C = a/b). Write suitable assertion for a > 0 in function DivExp and raise an exception for when b = 0. Develop a suitable program which reads two values from the console and calls a function DivExp.	**8**	**L3**	**CO3**
		Module – 5			
Q.9	**a.**	Define a class and object, construct the class called rectangle and initialize it with height = 100, width = 200, starting point as (x = 0, y = 0). Write a program to display the center point co-ordinates of a rectangle.	**8**	**L2**	**CO4**
	b.	Explain the concept of copying using copy module with an example.	**6**	**L2**	**CO4**
	c.	Explain the concept of inheritance with an example.	**6**	**L2**	**CO4**
		OR			
Q.10	**a.**	Define a function which takes two objects representing complex numbers and returns new complex number with a addition of two complex numbers. Define a suitable class 'Complex' to represent the complex number. Develop a program to read N(N >= 2) complex numbers and to compute the addition of N complex numbers.	**8**	**L2**	**CO4**
	b.	Explain __init__( ) and __str__( ) method with examples.	**6**	**L2**	**CO4**
	c.	Briefly explain the printing of objects with an examples.	**6**	**L2**	**CO4**

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