SR 22

St. Peter's Engineering College (Autonomous) Dullapally (P), Medchal, Hyderabad – 500100. MID – II EXAMINATION – APRIL 2025								
						Dept.	:	CSM, CSC
						Academic Year 2024-25		
Subject Code	:	AS22-05ES10	Subject	:	Fundamentals of Python Programming			
Class/Section	:	B. Tech.	Year	:	II	Semester	:	I
Duration	:	120 Min	Max. Marks	:	30	Date:	:	

BLOOMS LEVEL					
Remember	L1	Understand	L2	Apply	L3
Analyze	L4	Evaluate	L5	Create	L6

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PART – A (10x1M = 10M)

Note: Answer all Questions. Each Question carries equal marks.

Q. No		Question (s)	Marks	BL	CO
		UNIT - IV			
1	a)	Recall the characteristics of Object-Oriented Programming.	1M	L1	C224.4
	b)	Define an exception with a suitable example.	1M	L1	C224.4
	c)	Identify and list the types of inheritance used in Python.	1M	L1	C224.4
	d)	Define a class and give a basic syntax example in Python.	1M	L1	C224.4
		UNIT – V			
	e)	Recall the syntax used to open a file in read mode in Python.	1M	L1	C224.5
	f)	Define Tkinter and mention its purpose in Python GUI development.	1M	L1	C224.5
	g)	Identify any four commonly used file operations in Python.	1M	L1	C224.5
	h)	Describe a text file and explain its use in file handling.	1M	L2	C224.5
		UNIT – III			
	i)	Identify the various meta characters used in the re module in Python.	1M	L1	C224.3
	j)	Define a regular expression and explain its role in pattern matching.	1M	L1	C224.3

PART – B (20M)

Q. No		Question (s)	Marks	BL	CO
		UNIT - IV			
2	a)	Demonstrate method overloading in Python with explanation and a suitable example.	4M	L3	C224.4
	b)	Explain the concept of inheritance and its types with an appropriate Python example.	4M	L2	C224.4
		OR			

3	**a)**	Demonstrate the creation of a user-defined exception in Python using a suitable example.	**4M**	L3	C224.4
	b)	Explain the use of try, except, raise, and finally in Python exception handling with an example.	**4M**	L2	C224.4
	UNIT – V				
4		Explain the purpose of the file handling functions (open(), close(), tell(), read(), and write()) with syntax and examples.	**8M**	L2	C224.5
	OR				
5	**a)**	Explain the use of Tkinter in Python with examples of the pack(), grid(), and place() layout managers.	**4M**	L2	C224.5
	b)	Develop a Python GUI application for student registration using Tkinter widgets and layout managers.	**4M**	L5	C224.5
	UNIT – III				
6		Describe the use of match() and search() functions in Python with syntax and examples.	**4M**	L2	C224.3
	OR				
7		Develop a Python program using the re module to validate email addresses. Give the expected output when tested with the inputs: a@b.c and name@mail-com.	**4M**	L5	C224.6

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PART – A (10x1M = 10M)

Note: Answer all Questions. Each Question carries equal marks.

Q. No		Question (s)	Marks	BL	CO
		UNIT - IV			
1	a)	Define an object in Python and give a suitable example.	1M	L1	C224.4
	b)	Describe the purpose of the __init__() method in Python with an example.	1M	L2	C224.4
	c)	Define polymorphism and give a simple Python illustration.	1M	L1	C224.4
	d)	Define a user-defined exception in Python with syntax.	1M	L1	C224.4
		UNIT – V			
	e)	Differentiate between readline() and readlines() with syntax and usage.	1M	L2	C224.5
	f)	Explain how to create a Label widget using Tkinter with a simple example.	1M	L2	C224.5
	g)	Identify the different geometry managers used in Tkinter.	1M	L1	C224.5
	h)	Define a file in Python and list various file modes with their purpose.	1M	L1	C224.5
		UNIT – III			
	i)	Describe the purpose of findall() and sub() functions with syntax and examples.	1M	L2	C224.3
	j)	Explain the use of the re module in Python for regular expression operations.	1M	L2	C224.3

PART – B (20M)

Q. No		Question (s)	Marks	BL	CO
		UNIT - IV			
2	a)	Demonstrate handling multiple exceptions in Python using an example.	4M	L3	C224.4

	b)	Explain the usage of try, except, raise, and finally statements in Python with a suitable example.	**4M**	L2	C224.4
	OR				
3	**a)**	Explain the principles and key features of Object-Oriented Programming in Python with illustrations.	**4M**	L2	C224.4
	b)	Demonstrate multiple inheritance in Python using an appropriate program example.	**4M**	L3	C224.6
	UNIT – V				
4	**a)**	Explain how to create a Label widget and a text field in Tkinter using an example.	**4M**	L2	C224.5
	b)	Develop a Python GUI application for a login page using Tkinter.	**4M**	L6	C224.5
	OR				
5	**a)**	Explain the purpose and usage of Python file functions (open(), close(), seek(), tell(), read()) with syntax and examples.	**8M**	L2	C224.5
	UNIT – III				
6		Explain the use of meta characters in Python's re module with appropriate examples.	**4M**	L2	C224.3
	OR				
7		Explain the role of special symbols in Python's re module with suitable examples.	**4M**	L2	C224.3

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PART – A (10x1M = 10M)

Note: Answer all Questions. Each Question carries equal marks.

Q. No		Question (s)	Marks	BL	CO
		UNIT - IV			
1	**a)**	List any four built-in exceptions in Python.	**1M**	L1	C224.4
	b)	Explain the purpose and advantages of using inheritance in Python.	**1M**	L2	C224.4
	c)	Describe the use of the self keyword in Python classes with an example.	**1M**	L2	C224.4
	d)	Identify the keywords used for exception handling in Python (e.g., try, except, finally).	**1M**	L1	C224.4
		UNIT – V			
	e)	Explain the purpose of tell() and seek() functions in file handling with syntax.	**1M**	L2	C224.5
	f)	List the different ways to read a file in Python (e.g., read(), readline(), readlines()).	**1M**	L1	C224.5
	g)	Identify the different geometry managers used in Tkinter (pack, grid, place).	**1M**	L1	C224.5
	h)	Describe the steps to create a Label widget in Tkinter with a code snippet.	**1M**	L2	C224.5
		UNIT – III			
	i)	Describe the match() method in Python's re module with its syntax and use case.	**1M**	L2	C224.3
	j)	List the commonly used meta characters in Python's re module.	**1M**	L1	C224.3

PART – B (20M)

Q. No		Question (s)	Marks	BL	CO
		UNIT - IV			
2	**a)**	Demonstrate how to create and raise a user-defined exception in Python using an example.	**8M**	L3	C224.4

	OR				
3	**a)**	Explain the concept of constructors in Python with syntax and a suitable example.	**4M**	L2	C224.4
	b)	Demonstrate multi-level inheritance in Python with a working example program.	**4M**	L3	C224.4
	UNIT – V				
4	**a)**	Describe any four common file operations in Python (read, write, append, etc.) with examples.	**4M**	L2	C224.5
	b)	Develop a Python program to copy contents from one file to another using file handling functions.	**4M**	L6	C224.5
	OR				
5	**a)**	Explain the use of Tkinter in Python with examples for pack(), grid(), and place() layout managers.	**4M**	L2	C224.5
	b)	Develop a Tkinter GUI with two Radiobutton sets (for gender and nationality) on the same canvas. Include functional output.	**4M**	L6	C224.6
	UNIT – III				
6		Develop a Python program using the re module to validate email IDs and display results for a@b.c and name@mail-com.	**4M**	L6	C224.6
	OR				
7		Describe the purpose and usage of match(), findall(), search(), and sub() functions in Python's re module with examples.	**4M**	L2	C224.3

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