Faculty of Engineering
End Semester Examination May 2025
CA5EL54 Programming in Python

Programme	:	MCA / BCA-MCA (Integrated)	Branch/Specialisation	:	-
Duration	:	3 hours	Maximum Marks	:	60

Note: *All questions are compulsory. Internal choices, if any, are indicated. Assume suitable data if necessary. Notations and symbols have their usual meaning.*

				Section 1 (Answer all question(s))	**Marks**	**CO**	**BL**

Section 1 (Answer all question(s)) Marks CO BL

Q1. What will be the output of the following:-   **1 1 2**
```
x=24
print(10<x>20)
```
- ⚪ 10
- ⚫ True
- ⚪ 20
- ⚪ False

Q2. For multiline comments, Python uses: **1 1 1**
- ⚪ Single Quotes
- ⚪ //
- ⚪ #
- ⚫ Triples Quotes

Q3. Which function is not used to remove whitespaces from the string?   **1 1 1**
- ⚪ strip
- ⚪ rstrip
- ⚪ lstrip
- ⚫ removespace

Q4. What will be the output of the following code?   **1 1 2**
```
x = "Hello"
for i in range(len(x)):
    print(i, end="")
```
- ⚪ Hello
- ⚫ 01234
- ⚪ Hell
- ⚪ 1234

Q5. The type of inheritance illustrated in the following code is _____.   **1 3 2**
```
class A:
 pass
class B:
 pass
class C(A,B):
 pass
```
- ⚪ Multi-level inheritance
- ⚪ Hierarchical
- ⚫ Multiple
- ⚪ Single

Q6. Which code does not create an instance of Class "A" in Python?   **1 3 2**
- ⚪ a = A()
- ⚪ a = A(5)
- ⚪ a=A("Hello")
- ⚫ a = new A()

Q7. When is the finally block executed?   **1 5 1**
- ⚪ When there is no exception
- ⚪ Only if some condition that has been satisfied
- ⚪ When there is an exception
- ⚫ Always

Q8. Which of the following statements is false?   1   5   2

○ When you open a file for reading, if the file does not exist, an error occurs.
○ When you open a file for writing, if the file does not exist, a new file is created
○ When you open a file for writing, if the file exists, the existing file is overwritten with the new file
● When you open a file for writing, if the file does not exist, an error occurs

Q9. Which built-in package can be used to work with a regular expression?   1   4   1

○ regular_expression
○ regular
● re
○ None of these

Q10. Generator functions contain one or more _____ statements.   1   4   2

● yield
○ break
○ continue
○ pass

Section 2 (Answer all question(s))   Marks CO BL

Q11. How will you write comments in Python give examples.   2   1   1

Rubric	Marks
Example of giving comments	2

Q12. Describe any three features of Python.   3   1   1

Rubric	Marks
Features with explanation.	3

Q13. (a) Write a program to find the maximum of 3 numbers using relational and logical operators.   5   1   1

Rubric	Marks
Input 3 number 1- Mark Logic-4 Marks	5

(OR)

(b) Apply the 5 bitwise operators on a = 35 and b= 47, and show the result.

Rubric	Marks
5 bitwise operator results	5

Section 3 (Answer any 2 question(s))   Marks CO BL

Q14. Write a complete program for the Fibonacci series using recursion.   5   1   3

Rubric	Marks
Recursion-3 Marks Input, loop, and calling recursion-2 Marks	5

Q15. Explain iterative statements in Python using examples.   5   1   2

Rubric	Marks
2.5- Marks-for loop with an example while looping with an example-2.5 Marks	5

Q16. Write a program to create a list by taking user input, append the elements using the append function, and display the list.   **5 2 3**

Rubric	Marks
List declaration and user input—2 marks append function 1-Marks display list-2 Marks	5

Section 4 (Answer all question(s))
<div align="right">Marks CO BL</div>

Q17. Define the constructor and its usage.   **3 3 2**

Rubric	Marks
Constructor definition-1 Mark Constructor usage-2 Marks	3

Q18. (a) Write a complete Python program of operator overloading to add two complex numbers.   **7 3 1**

Rubric	Marks
Input the complex number-2 Output the complex number-2 operator overloading method 2. It is mainly for the creation of objects and calling other functions-1 Marks	7

(OR)

(b) Write a complete Python program for multilevel inheritance.

Rubric	Marks
Main program-2 Multilevel inheritance-5 Marks	7

Section 5 (Answer any 2 question(s))
<div align="right">Marks CO BL</div>

Q19. Write a program using try, except, and finally block.   **5 5 3**

Rubric	Marks
Complete program	5

Q20. Explain five functions of the set.   **5 2 1**

Rubric	Marks
5 functions of set	5

Q21. Write a program to enter name and percentage marks in a dictionary and display information on the screen.   **5 2 3**

Rubric	Marks
Input Dictionary-2.5 Output Dictionary-2.5	5

Section 6 (Answer any 2 question(s))
<div align="right">Marks CO BL</div>

Q22. Explain the Iterator with an example.   **5 4 2**

Rubric	Marks
Explain iterator-2.5. An example of an Iterator-2.5 Marks	5

Q23. Write the differences between the normal function and the generator function.   **5 4 2**

Rubric	Marks
differences between the normal function and the generator function.	5

Q24. Define decorator and write steps to create a decorator.   **5**   **3**   **2**

Rubric	Marks
Define decorator-2.5 Write the steps to create a decorator-2.5 Marks	5

******