

**CERTIFICATE IN MOBILE
APPLICATION DEVELOPMENT
(CMAD)**

Term-End Examination

December, 2025

BCS-094 : PROGRAMMING USING PYTHON

Time : 3 Hours

Maximum Marks : 75

Note : *Question No. 1 is compulsory. Attempt
any **three** questions from the rest.*

1. (a) Write a Python program which take marks of a class test of a student and display “Good” if marks are greater than 30 and display “Need improvement” otherwise. 6

- (b) What is Object Oriented Programming ?
Explain the concept of object and class with example. Write code to explain how a class is defined in Python. 6
- (c) What is the need of software testing ?
Explain the difference between functional and non-functional testing. 6
- (d) What is syntax error ? Explain how syntax error may be avoided in Python with the help of an example. 6
- (e) What is data encapsulation ? Compare public, private and protected access specifiers used in Python. 6
2. (a) What is unit test in Python ?
Explain the concepts used in unit test framework. 7
- (b) What is exception ? Explain the difference between built-in exception and user defined exception. Also explain how exceptions are handled in Python the example code. 8

3. (a) Write Python code to create a database file and a table named “STUDENT” with three columns “Enrollment No”, “Name” and “Programme”. Write suitable comments in your code. 7
- (b) What is method overloading and method overriding ? Explain how these concepts are implemented in Python. 8
4. (a) Write a Python program which define Account class. Define appropriate constructor for this class. Also this class should have a method to display the account details. 5
- (b) Write a Python program using while loop to find the sum of first N numbers. 5
- (c) Explain operator overloading in Python with an example. 5

5. Briefly explain any *three* of the following using suitable example/diagram : $3 \times 5 = 15$

- (a) Kivy Architecture
- (b) String Slices
- (c) Tuples and List
- (d) Mobile application development platforms

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