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BCS–094

CERTIFICATE IN MOBILE APPLICATION DEVELOPMENT (CMAD)

Term-End Examination

June, 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) What is the purpose of layouts in mobile application development ? Explain all *five* types of Kivy layouts. 6

   (b) What are Integrity constraints ? Explain the different types of integrity constraints with suitable examples for each. 6

(c) What are profilers ? How do profilers differ from debuggers ? Give example for both (i.e.,) profiler and debugger. 6

(d) Explain the concept of overriding with suitable code in Python. 6

(e) Compare the execution of break, continue and pass statements with suitable example for each. 6

2. (a) What is Tkinter ? How is it different from Kivy ? Write a program in Python using Tkinter to illustrate how to work with buttons, may your code display the message 'Hello world' when the button titled 'Greeting' is pressed. 8

(b) Briefly discuss the utility of Buildozer tool and list the steps to follow when the Buildozer tool is used on Linux. 7

3. (a) Differentiate between Batterystats and Battery historian. Give utility for both. 5

(b) Describe the following in one or *two* lines : 5

(i) pip

(ii) wheel

(iii) openGL

(iv) PyGame

(v) QPython

(c) Briefly describe the term "Cross platform mobile application development". What is its use ? List any two top tools used for cross-formatting mobile application development. 5

4. (a) What is software testing ? How does verification differ from validation ? Explain with example. 5

(b) List various testing techniques performed pre- and post-software development. 5

(c) Differentiate between the following : 5

(i) Lambda functions and Built-in functions

(ii) C and Python

5. Write short notes on the following (with example) : 3×5=15

(a) Blackbox testing

(b) Syntax errors

(c) Mutable data types

(d) _init_method

(e) Boundary Value Analysis

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