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**BCS-094**

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

**Term-End Examination**

**June, 2024**

**BCS-094 : PROGRAMMING USING PYTHON**

*Time : 3 Hours*

*Maximum Marks : 75*

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**Note :** Question No. 1 is compulsory. Answer **any three** Questions from the remaining Questions.

1. (a) Briefly discuss the salient features of the following: 6
- (i) Machine language
  - (ii) Assembly language
  - (iii) High level language
- (b) Differentiate between Syntax errors, semantic errors and Runtime errors, give suitable example for each. 6

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- (c) Compare interactive mode and script mode of execution of any Program in Python, give suitable example for each. 6
- (d) What are mutable data structure in Python ? How do they differ from immutable data structures ? List all mutable and Immutable data structures, separately. 6
- (e) What are constructors ? Briefly discuss the utility of -init-method, with a suitable code in Python. 6
2. (a) Write short notes on the following : 8
- (i) Multiple Inheritance
  - (ii) Data Encapsulation
  - (iii) Polymorphism
  - (iv) Operator overloading
- (b) Differentiate between the following : 7
- (i) Testing during the development  
and  
Testing after the development.

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- (ii) Function testing and non-functional testing.
3. (a) What are profilers ? Briefly discuss profile, c profile and hotshot modules for profiling. 7
- (b) Briefly discuss the role of cursor in DBMS. While Python code to demonstrate the execution of Insert, Select, Delete, Update, Altertable and Drop table commands. 8
4. (a) Draw the architecture of kivy. Briefly discuss the role of each component of Kivy architecture. 8
- (b) Compare DBMS and RDBMS. Write a code in Python to create a database file and a table, 'Product' with three columns 'Prod-Id', 'Prod-name', 'Price'. 7
5. Discuss the following with suitable example for each :  $3 \times 5 = 15$
- (i) Buildozer tool
- (ii) Debugger modules

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- (iii) Alpha testing
- (iv) Lambda functions.
- (v) SQL CRUD statements.

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