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BCS–094

CERTIFICATE IN MOBILE APPLICATION DEVELOPMENT (CMAD)

Term-End Examination

December, 2023

BCS-094 : PROGRAMMING USING PYTHON

Time : 3 Hours *Maximum Marks : 75*

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) Python

   (ii) HDL

   (iii) Visi Rule

   (b) What are language translators ? Briefly discuss the types of language translators. 6

   (c) Compare the execution of Break, Continue and Pass statements in Python. Give suitable example for each. 6

(d) Explain lambda functions in Python. Give suitable example code of Python in support of your explanation. Also, compare lambda functions with Built-in functions. 6

(e) Differentiate between overloading and overriding. Illustrate operator overloading, with the help of suitable code in Python. 6

2. (a) Write short notes on the following : 8

(i) Exception handling

(ii) –str–method

(iii) –init–method

(iv) Dictionaries

(b) What do you understand by software testing ? Explain testing in various stages of the software development. Support your explanation with suitable diagram. 7

3. (a) What is debugging ? Briefly discuss the 'bdb' and 'pdb' modules for debugging. Illustrate the usage of running a program under control of a debugger, with suitable code in Python. 8

(b) What is DBMS ? Write a code in Python to create a database file and a table 'Emp-Details' with two columns 'EmpID' and 'EmpName'. 7

4. (a) Briefly discuss the following with suitable example for each : 8

   (i) Key constraints

   (ii) Domain constraints

   (iii) Entity Integrity constraints

   (iv) Referential Integrity constraints

   (b) What is Tkinter ? With the help of a suitable code, demonstrate how Tkinter is used to embedd labels, checkbuttons and listbox in any GUI. 7

5. Discuss the following, with suitable example for each : 5×3=15

   (i) Testing during the development

   (ii) Testing after the development

   (iii) Functional and Non-functional testing