QP CODE 2033511505

Reg. No

DMI-ST. EUGENE UNIVERSITY

ZAMBIA

DEGREE EXAMINATION – JUNE 2024

Semester: III

351CP15 PYTHON PROGRAMMING

Time: 3:00 Hours

Max. Marks: 100

Answer any FIVE Questions (5 x 20 = 100 Marks)

1. a) Explain the significance of Python as a high-level programming language.**(10 Marks)**
   b) List and describe the different types of operators supported by Python, providing examples for each type. **(10 Marks)**
2. a) Define a list and describe the methods available for adding, removing, and accessing elements in a list, providing examples for each operation. **(10 Marks)**
   b) Explicate the concept of tuples in Python. Discuss the advantages of using tuples over lists in certain scenarios and provide examples. **(10 Marks)**
3. a) Explain the concept of Object-Oriented Programming (OOP). **(10 Marks)**
   b) Discuss the components of a class definition, including attributes and methods, providing examples for each. **(10 Marks)**
4. a) Elucidate the role of containers such as frames and canvases in organizing and grouping widgets within a GUI application. **(10 Marks)**
   b) Demonstrate how frames are used to organize and group other widgets within a GUI application, providing examples. **(10 Marks)**
5. a) Discuss a protocol in the context of networking and the role of protocols in establishing and governing communication between devices on a network. **(10 Marks)**
   b) Discuss a protocol in the context of networking and the role of protocols in establishing and governing communication between devices on a network. **(10 Marks)**
6. a) Explain the TCP/IP protocol suite. Discuss the layers of the TCP/IP model and their respective responsibilities in network communication. **(10 Marks)**
   b) Explain the process of calling a function in Python with the program. **(10 Marks)**

7. a) Define strings and discuss the various methods available for manipulating strings, providing examples for at least three string methods. **(10 Marks)**

b) Demonstrate the methods available for adding, removing, and accessing key-value pairs in a dictionary, providing examples for each operation. **(10 Marks)**