Time : 2.5Hours] [Total Marks : 70

1 (A) Answer the following: 4

1 IDLE stands for _____

2 _____ is/are container(s) for storing basic data value(s)

3 _____ is the creator/inventor of the Python programming language

4 _____ default extension of python file

(B) Answer in brief (Any one out of two) 2

1 Explain LIST data Type

2 What is Dictionary in Python ?

(C) Answer in detail (Any one out of two) 3

1 Explain Branching statements in Python

2 Explain TUPLE datatype in Python with example

(D) Write a note on (Any one out of two) 5

1 Explain Function and Scoping with example

2 Explain Iteration statements with example

2 (A) Answer the following: 4

1 ADT stands for _____

2 _____ catches all exceptions

3 _____ statement forces exception to occur

4 The _____ block executes code regardless of whether an exception occurs or not

(B) Answer in brief (Any one out of two) 2

1 What is AttributeError in Python?

2 What is ValueError in Python ?

(C) Answer in detail (Any out of two)   3
1   Explain ADT in Python
2   Explain Inheritance in Python

(D) Write a note on (Any one out of two)   5
1   Explain "Linear Search" with example in Python
2   Explain "Bubble Sort" with example in Python

3   (A) Answer the following: 4
1   The _____() function is used to create a new figure in PyLab
2   The _____() function is used to display a plot on the screen in PyLab
3   The _____() function is used to save a plot as a PNG file in PyLab
4   An example of a sorting algorithm that uses the divide-and-conquer approach is
    _____ sort

(B) Answer in brief (Any one out of two)   2
1   Explain pylab.title, pylab.xlabel and pylab.ylabel
2   What is Memoization?

(C) Answer in detail (Any one out of two)   3
1   Explain Fibonacci sequence
2   Explain Divide and Conquer algorithm

(D) Write a note on (Any one out of two)   5
1   Explain Plotting Mortgages
2   Explain the 0/1 Knapsack algorithm

4   (A) Answer the following: 4
1   The _____ module is commonly used for socket programming to handle network
    connections.
2   The _____ method is used to associate the socket with a specific network interface
    and port number.
3   The _____ protocol is used to send email over the internet.
4   The "socket.gethostname()" function in Python returns the _____ of the machine

(B) Answer in brief (Any one out of two)   2
1   Explain recv() and recvfrom() socket method
2   Explain send() and sendto() socket method

(C) Answer in detail (Any one out of two)   3
1   Explain buttons, labels and entry fields in Python
2   Explain widget attributes in Python GUI

(D) Write a note on (Any one out of two)   5
   1   Write Python Code to Download a Web Page from Internet
   2   Write Python Code to Download an Image from Internet

5   (A) Answer the following: 4
    1   The method _____() is used to establish a connection to a database
    2   The method _____() is used to execute an SQL command
    3   The method _____() is used to fetch all results by a query from database
    4   The method _____() is used to set layout widgets in a grid format in Tkinter

    (B) Answer In brief (Any one out of two)   2
    1   What does the commit() method do in MySQL database operations in Python?
    2   What method in Python is used to close a cursor object after executing a query?

    (C) Answer in detail (Any one out of two)   3
    1   Explain the cursor object in Python when interacting with a MySQL database
    2   Explain the "executemany()" method in Python with a MySQL database

    (D) Write a note on (Any one out of two)   5
    1   Write a Python code to Create MySQL Database Tables through Python
    2   Write a Python code to Insert and Delete Rows into / from Database Table