N. B.: (1) All questions are compulsory.

(2) Make suitable assumptions wherever necessary and state the assumptions made.

(3) Answers to the same question must be written together.

(4) Numbers to the right indicate marks.

(5) Draw neat labeled diagrams wherever necessary.

(6) Use of Non-programmable calculators is allowed.

Q.1 . Attempt _any three_ of the following: **15M**

A. Explain briefly the difference between Interactive mode and Script mode in python.

B. Explain steps of installing python in windows and Linux os.

C. Explain the features of python programming.

D. Write short note on various types of errors in python.

E. Write short note on type conversion.

F. Write a python program to calculate percentage of five subjects.

Q.2. Attempt _any three_ of the following: **15M**

A. Write short note on math function.

B. Define what is function and how to define function. Give example for same.

C. Explain what is fruitful function and void function.

D. Explain what is stack diagram with example.

E. Write a python program to calculate Fibonacci series using recursive function.

F. Write a python program to reverse the string.

Q.3. Attempt _any three_ of the following: **15M**

A. How to create dictionary in python? Give example.

B. What are list, explain how to add and delete element from list?

C. Explain Built-in list operators.

D. Explain what are tuples and how to access values in tuple with example.

E. Write short note on file attribute.

F. Write a short note on user-defined exception with example.

Q.4. Attempt *any three* of the following: 15M

    A. Explain match function in detail.

    B. Explain method overriding with example.

    C. Write short note on Random module.

    D. Define a class in python to calculate factorial of a given number.

    E. Explain how to create a thread in python.

    F. List and explain built in class attributes. Give example of each.

Q.5. Attempt *any three* of the following: 15M

    A. Write a python program to create GUI which accept a number from user into textbox and print whether the number is palindrome or not .

    B. Explain in detail Message widget in python.

    C. Write a program in python to do student registration with database connectivity.

    D. Explain the use of Menu in python.

    E. Write the difference between Checkbutton and Radiobutton.

    F. What are the steps to connect to MySQL database from python?