M.Sc.(Mathematics) (NEP Pattern) Semester-I

NEP-64-6 / DSE-6 - SCILAB Programming

P. Pages : 2 **GUG/W/23/15120**

Time : Three Hours * 8 0 4 7 * Max. Marks : 80

Notes : 1. Solve all **five** questions.
2. All questions carry equal marks.

UNIT – I

1. a) Write a note on mathematical operations on scalars in SCILAB. **8**

b) Explain the built-in logical functions available in SCILAB. **8**

OR

c) Write a note on history of SCILAB. **8**

d) Discuss manipulation of the command line in SCILAB. **8**

UNIT – II

2. a) Write a note on various basic matrix operations in SCILAB. **8**

b) Discuss the concept of while loop. Write a program to find factorial of a number in using while loop. **8**

OR

c) Which branching statements are available in SCILAB? Explain with example. **8**

d) Discuss the matrices with various data types and basic arithmetic operations. **8**

UNIT – III

3. a) Discuss basic polynomial commands available in SCILAB. **8**

b) Discuss the polynomial handling operations in SCILAB. **8**

OR

c) Write a note on the commands available for plotting graphic primitives in SCILAB. **8**

d) Discuss 3D plotting command available in SCILAB. **8**

UNIT – IV

4. a) Discuss the concept of string matching, string concatenation and reversing a string in SCILAB. **8**

b) Discuss the application of statistical functions on matrices. **8**

OR

c) Write a note on computation of frequency of values of a matrix or vector. **8**

d) Write a note on symbolic processing in SCILAB. **8**

5. a) Write a short note on working directory. **4**

b) What are eigenvalues and Eigenvalues of a matrix. How eigenvalues and eigenvectors can be found in SCILAB. **4**

c) Write a note on graphic window in SCILAB. **4**

d) Write a short note on percentiles. **4**

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