

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Voc. (Solar System Technology) (Sem.-3)

BASICS OF PROGRAMMING-I

Subject Code : SST-302

M.Code : 93234

Date of Examination : 23-01-23

Time : 3 Hrs.

Max. Marks : 30

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **ONE** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **TWO & HALF** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **FIVE** marks each and students have to attempt any **TWO** questions.

SECTION-A

1. **Write briefly :**
 - a. Write down the steps of installing MATLAB.
 - b. How is the disp function used in MATLAB? Give example.
 - c. What are the differences between a MATLAB script file and a function?
 - d. What is the significance of the H1 comment line in a MATLAB function?
 - e. What is the pass-by-value scheme in MATLAB? How does it contribute to good program design?
 - f. What is the difference between an array, a matrix, and a vector?
 - g. What is an M-file?
 - h. Discuss **any four** variable datatypes available in Python.
 - i. Give an example of 'while' loop in MATLAB.
 - j. What is a Python script?

SECTION-B

2. How are variables created and initialized in MATLAB? Explain with the help of examples.
3. What are multidimensional arrays? How are they created in MATLAB? Determine the contents of array a after the following statements are executed :

`a = [1 2 3; 4 5 6; 7 8 9]; a([3 1],:) = a([1 3],:);`

4. What are the advantages and disadvantages of MATLAB? List some real life applications of MATLAB programming.
5. Discuss various types of operators available in MATLAB. Illustrate how they are used with the help of examples?
6. What do you mean by debugging? How are dbstop and dbclear used for debugging in MATLAB?

SECTION-C

7. Write a detailed note on any five commonly used MATLAB in-built functions. Illustrate how they are used?
8. Write a detailed note on the conditional statements used in MATLAB. Illustrate how they are used?
9. What are the basic elements of Python programming language? Write a program that asks the user to enter three numbers (use three separate input statements). Create variables called total and average that hold the sum and average of the three numbers and print out the values of total and average.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.