

Roll No.

(12/24)

15227

M.Sc. (2 Year) EXAMINATION

(For Batch 2021 & Onwards)

(Third Semester)

MATHEMATICS

MSc./Maths/3/SEC3

Computer Programming in MATLAB (Theory)

Time : Two Hours

Maximum Marks : 30

Note : Attempt *Three* questions in all, selecting *one* question from each Unit. Q. No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. (a) Define row vector and column vector in MATLAB. 2

(b) Define $A(m : n, p : q)$ for a matrix A in MATLAB. 2

(c) Express : 2

$$\frac{(-1)^n x^{n+2m}}{m!(n+m)!}$$

in MATLAB.

(d) Define Left division in MATRIX using MATLAB. 2

(e) Define Local variables in MATLAB. 2

Unit I

2. (a) Define various data types in MATLAB. 5

(b) Explain concatenation in MATLAB. 5

3. Explain various relational and logical operators on arrays in MATLAB. 10

Unit II

4. Define If else : 10

(i) IF and else

(ii) Switch and case

(iii) For loop

(iv) Continue statements.

5. Define : 10

(i) Multidimensional arrays

(ii) Characters and text

(iii) Global variables

(iv) The eval function.