

2022
B.A./B.Sc.
Fourth Semester
 SKILL ENHANCEMENT COURSE – 2
COMPUTER SCIENCE
Course Code: CSS 4.11
 (Programming in MATLAB)

Total Mark: 35

Pass Mark: 14

Time: 2 hours

Answer five questions, taking one from each unit.

UNIT-I

1. (a) Explain different components of a computer. 5
 (b) Do the following conversions:
 (i) $(11672)_8 = (?)_{10}$
 (ii) $(1001001100)_2 = (?)_{10}$ 1+1=2
2. (a) What is meant by debugging? 2
 (b) What is machine code? Explain software hierarchy. 2+3=5

UNIT-II

3. (a) What is a command window? 2
 (b) What is MATLAB? Explain advantages and disadvantages of MATLAB. 1+4= 5
4. (a) Write how to add comments in MATLAB program. 2
 (b) Explain MATLAB work environment. 5

UNIT-III

5. (a) What are built in functions? 2
 (b) Explain plot command in MATLAB. 5

6. (a) Differentiate between procedures and functions. 4
 (b) Write a MATLAB program to solve the set of linear system equations using the matrix method: 3
- $$2x + 2y + 3z = 9$$
- $$x - y + 3z = 8$$
- $$3x + y - z = 3$$

UNIT-IV

7. (a) Give any two advantages of cell array in MATLAB programming. 2
 (b) Describe about control-flow structures frequently used in MATLAB programming with examples. 5
8. (a) What are basic conditional statements available in MATLAB? 4
 (b) Find the determinant of $A = \begin{pmatrix} 3 & 4 \\ 2 & 3 \end{pmatrix}$ and write the MATLAB command for determinant? 1+2=3

UNIT-V

9. (a) Write MATLAB program to sort vector $V = [23 \ 45 \ 12 \ 9 \ 5 \ 0 \ 19 \ 17]$ using MATLAB commands. 2
 (b) Write a short note on fopen function of MATLAB. 5
10. (a) Write how to write text to a file. Differentiate between rand(6) and randi(6). 2+2=4
 (b) Explain GUI in MATLAB. 3