PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2019
(Fifth Semester)

Branch – **MATHEMATICS WITH COMPUTER APPLICATIONS**

CORE ELECTIVE – I : MATLAB

Time : Three Hours Maximum : 75 Marks

SECTION-A (20 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 x 2 = 20)

1 What is the purpose of workspace window?
2 Explain round(x) and rem(x,y).
3 Write down the command to create a square matrix with the elements of v in the diagonal V as a vector.
4 Explain the function cross (a,b) with an example.
5 Write down the two commands that are frequently used to generate output.
6 Write down the default command to create two-dimensional plot.
7 Explain stem plot with en example.
8 What is the output of the command executed in MATLAB? >>3+4<16/2?
9 What does the function definition line function trajectory (v,h,9) describe?
10 What is the output of this program is executed in MATLAB?

```
for k=1:3:10
   x=k^2
   end.
```

SECTION - B (25 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

11 a Explain about display formats.
OR
b Explain about elementary math built in functions.

12 a Explain Built in functions for handling arrays.
OR
b Create the following three matrices

$$A=\begin{bmatrix}3 & 5 & -2\\ 4 & 2 & -6\\ 1 & 0 & 5\end{bmatrix} \quad B=\begin{bmatrix}-1 & 4 & 1\\ -2 & 5 & 6\\ 0 & 7 & 8\end{bmatrix} \quad C=\begin{bmatrix}1 & 2 & 6\\ 3 & 0 & -3\\ 3 & 5 & -2\end{bmatrix}$$

In MATLAB show that addition of matrices is associative.

13 a Explain disp command with an example.
OR
b Write a short note on fplot command.

14 a Explain about plots with special graphics.
OR
b Explain about inline functions.

15 a Explain about nested loops and nested conditional statements.
OR
b Write a note on break and continue command.

SECTION - C (30 Marks)
Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

16 Discuss about MATLAB windows and working in the command window.
17 Explain in detail about built in functions for analyzing arrays.
18 Explain about plot command in MATLAB.
19 Explain about formatting a plot.