PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2018
(Third Semester)

Branch - APPLIED ELECTRONICS

DIGITAL SIGNAL PROCESSING

Time : Three Hours Maximum : 75 Marks

SECTION -A (30 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks (5 x 6 = 30)

1 a Determine whether the system described by the differential equation :

$\frac{dt}{} + 2y(t) = x(t)$ is linear,

OR

b Discuss the time response analysis of discrete time system.

2 a State and explain any 6 properties of DFT.

OR

b How is the circular convolution of two sequences x^n) and $x_2(n)$ performed?

3 a Describe the design procedure for comb filters.

OR

b What is an FIR system? Compare an FIR system with an HR system.

4 a Describe the internal memory organization of TMS320C5416.

OR

b Describe the interrupt structure of TMS320C5416.

5 a Explain the Inline functions of MATLAB.

OR

b Describe the cell arrays used in MATLAB.

SECTION-B (45 Marks!
Answer any THREE questions
ALL questions carry EQUAL Marks (3 x 1 5 = 45)

6 Discuss the classifications of signals with suitable examples.

7 Explain n-point Radix - 2 Decimation - in - Time FFT algorithm.

8 Describe the procedure for designing an FIR filter using Kaiser window.

9 Draw the block diagram of TMS3205416 and describe its internal architecture.

10 i) Explain the relational and logical operators used in MATLAB.

ii) Write a note on MATLAB debugger.

Z-Z-Z