

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2019
(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 Explain the following:
(i) Signals (ii) System and (iii) Signal Processing.
OR
b Discuss the classifications of discrete time systems.
- 2 a Compare and contrast circular and linear convolutions.
OR
b Explain Radix2, N-point DIT FFT Algorithm.
- 3 a Discuss the design of Comb filters.
OR
b Compare HR and FIR filters.
- 4 a List the key features of TMS 320C 5416.
OR
b Describe the interrupts of TMS 320C 5416.
- 5 a Write a note on cell arrays.
OR
b Describe the M-files used in MATLAB.

SECTION -B (45 Marks)

Answer any THREE questions

ALL questions carry EQUAL Marks (3 x 15 = 45)

- 6 Explain in detail the time response analysis of discrete time systems.

State and explain the properties of discrete Fourier series and discrete Fourier transforms.
- 8 Discuss in detail the design of FIR filters by windowing technique.
- 9 Draw the functional block diagram of TMS 320C 5416 and describe the functions of each block.
- 10 Explain 2D and 3D graphics design using MATLAB.

Z-Z-Z

END