

**Synoptic of MSE Course: Digital Signal Processing CPC701**

**Date 21/08/2018 & Time: 2 to 3:30pm**

**Q.1 5M**

1. Equation for Nyquist rate according to sampling theorem = 1M
2. Finding Nyquist rate = 1M
3. Evaluating sampling technique = 3M

**Q.2 5M**

1. Evaluation = 1.5M (each)
2. Sketching of discrete time signal = 1M (each)

**Q.3 5M**

1. Finding length of  $y(n)$  = 1 M
2. Computation of Linear Convolution = 4M

**OR**

**Q.3 5M**

1. Finding length of  $y(n)$  = 1M
2. Creating the zero padded sequences = 1M
3. Computation of LC by Circular Convolution circulant matrix = 3M

**Q.4 5M**

1. Equation of DFT carry = 1M
2. Determining values of DFT signal  $X(K)$  = 3M
3. Finding the magnitude sequence = 0.5M
4. Plotting the magnitude spectrum = 0.5M

**OR**

**Q.4 5M**

1. Equation of IDFT carry = 1M
2. Determining values of IDFT signal  $x(n)$  = 4M

**Q.5 5M**

1. Equation of Linear convolution = 1M
2. Evolution = 3.5M
3. Conclusion or Justification = 0.5M

**Q.6 5M**

1. Evolution = 2M(each)
2. Justification = 0.5M

**OR**

**Q.6 5M**

1. Evaluation = 2M(each)
2. Justification = 0.5M