**18ECC204J-DIGITAL SIGNAL PROCESSING**

**ASSIGNMENT-I**

**ANSWER ALL QUESTIONS (5\*4=20 Marks)**

1. Investigate the theorem behind the conversion of continuous time signal to discrete time signal and the condition for perfect recovery of the signal.
2. Which type of filter is recommended to be used prior to sampling and why?
3. Why quantization of signal is necessary? Illustrate.
4. Describe the methods used to eliminate the excess digits during quantization process.
5. Justify how the Signal to Quantization Noise Ratio improve by 6 dB for every bit added to the word length.