

### QUIZ-3

1.
  - i. Calculate Nyquist interval and Nyquist rate of the signal  $g(t) = \text{sinc}^2(200t)$ .
  - ii. Convert the signal into Discrete time signal  $v(t) = \cos 2\pi (10)t$  if the sampling frequency is 40 Hz.
2.
  - i. Write the condition for over sampling, under sampling if sampling frequency is  $f_s$  and  $f_m$  is the original signal frequency.
  - ii. Find the Discrete time Fourier Transform of the sequence  $y(n) = \left(\frac{1}{4}\right)^n u(n)$ .

## QUIZ-5

1.
  - i. write the expression for DFT of a DT sequence
  - ii. write the expression for IDFT of a DT sequence
  
2.
  - i. calculate DFT of the sequence  $\{1,0,0,1\}$ .
  - ii. write the expression for DFS.