f_s = 2500Hz. passband 0-500
stop band 600-1250

$f_{cut\text{-}off} = (500+600)/2 = 550$

FIR: $h_{fir} = sinc(2f_c/f_s \cdot [n[0:20] - (N-1)/2]) \cdot (2f_c/f_s)$

$h = (0.033, -0.0044, -0.039, -0.011, 0.048, 0.0374, -0.0545, -0.0896, 0.0586, 0.312, 0.44 \ldots)$

11 numbers Symmetrical

Question 5

$h[n] = \frac{sin(w_c(n-\beta))}{\pi(n-\beta)} w[n]$ $\beta = 11$

Pass: $(2000+1500)/f_s/2/2$

$h[n] = [-0.04, 0.0225, 0.068, -3.41, -0.0825, -0.03)5, 0.088, 0.0796, -0.0655, -0.1125, 0.0242 \ldots]$

11 numbers, Symmetrical.

2nd is 0.25