

LAB-9 THEROY

QUESTION 9.1

- b. As the estimation of N is expanded the quantity of ripples in the range increments also, the width of the principle projection diminishes.
- c. The phase for each of the windows is linear and periodic.
- d.

Type of Window	Width of main lobe
Rectangular	20
Bartlett	40
Hamming	42
Hanning	40
Blackman	60

This samples will be converted to frequency by the formula $W = 2 \cdot \pi \cdot \text{sample} / 500$

- e. For Rectangular window We can observe that these values are nearly same for different values of N.

N	Difference between heights of side lobe and main lobe
51	13.25
75	13.46
101	13.27

QUESTION – 9.2

- d. Comparing the levels of transition region and the side lobe levels, we observe that these levels are higher for Blackman window than for the rectangular window. Now comparing these values to the corresponding functions in 9.1 we can say that the side lobe levels are nearly same, but the width of the transition region is larger in the compared to the observation in 9.1.
- f. The new channel built from the channel in a, b we can say that this channel is neither a LPF nor HPF in the given span.