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|  | Lab 1: Sampling theorem and its example |
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|  | Akshar Panchani ID- 202101522  IT314 Software Engineering  7/31/23 |

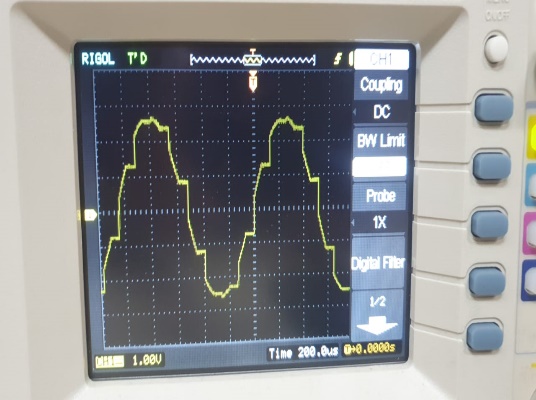
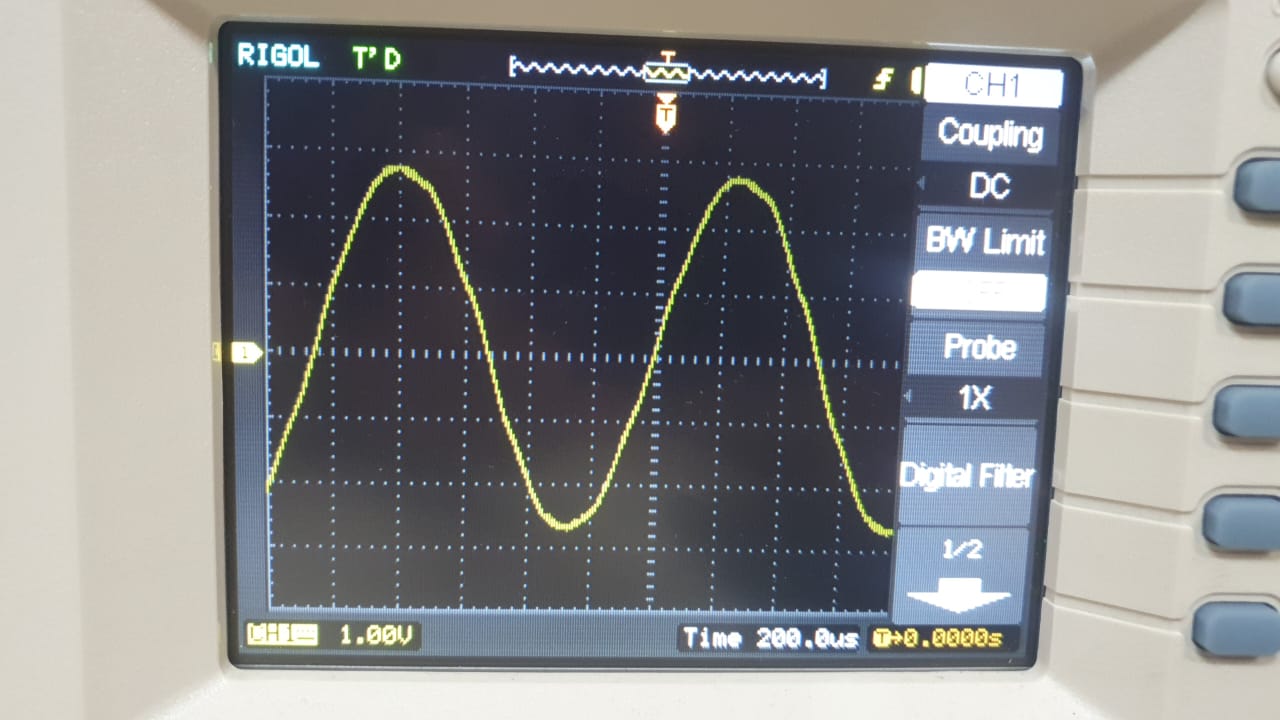
**Lab 1: Sampling theorem and its example**

EXERCISE 1:

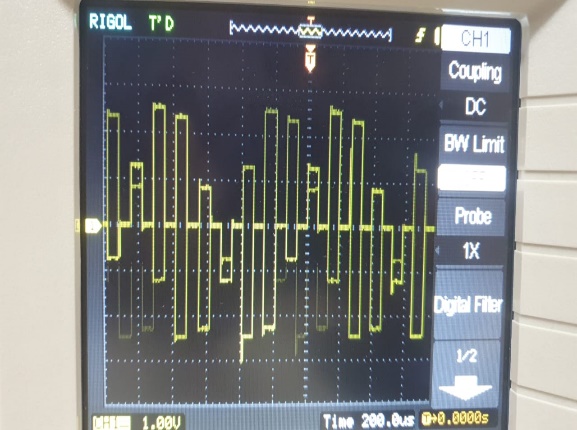
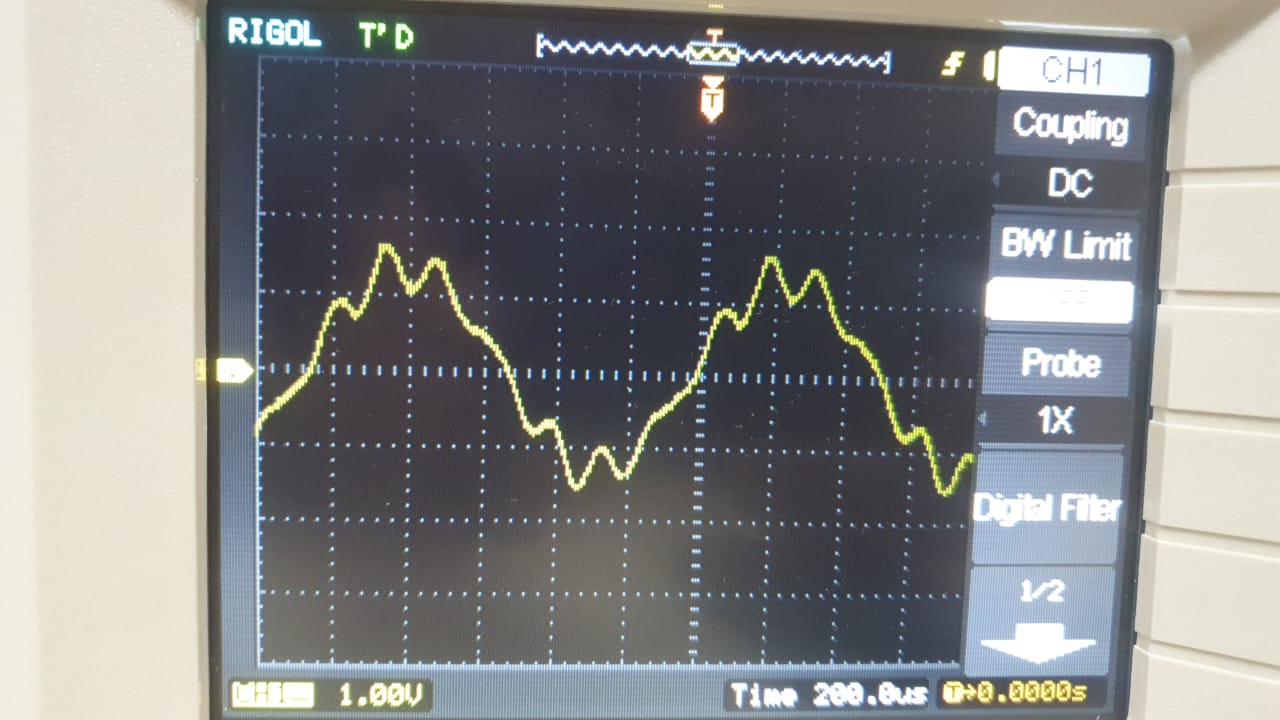
Natural Sampling with 1Khz

Sample Hold

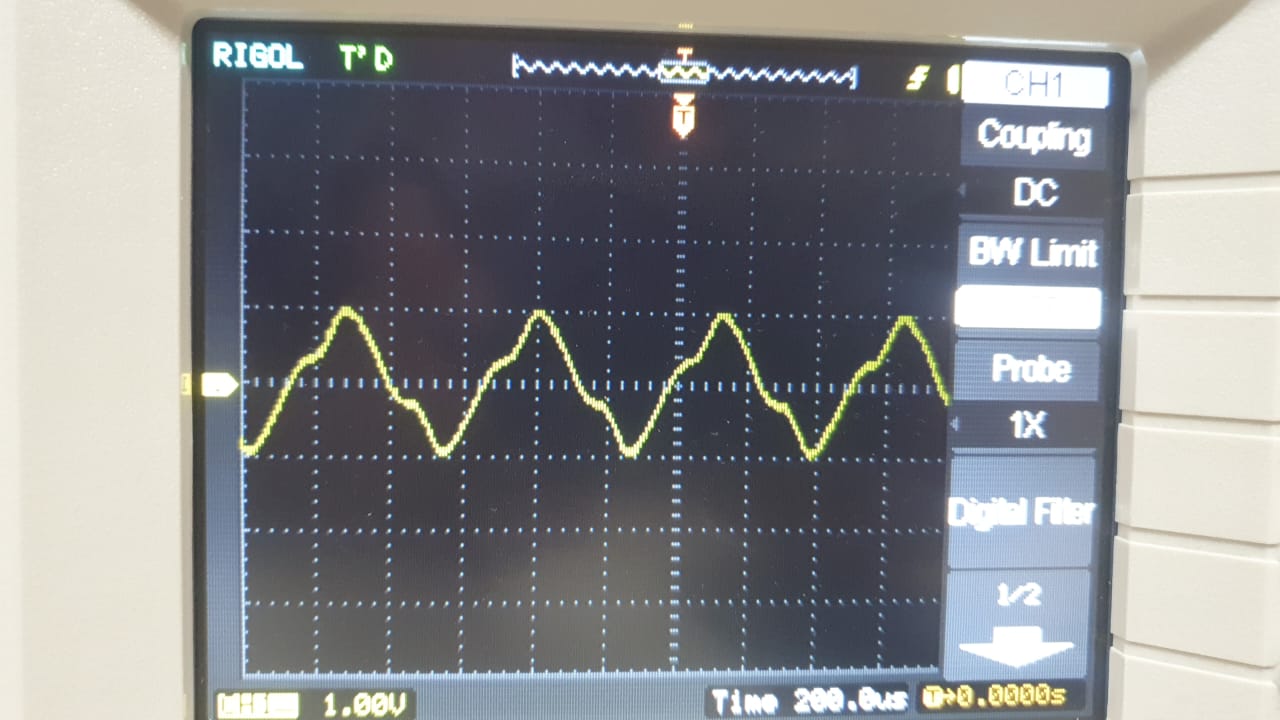
 

Flat top

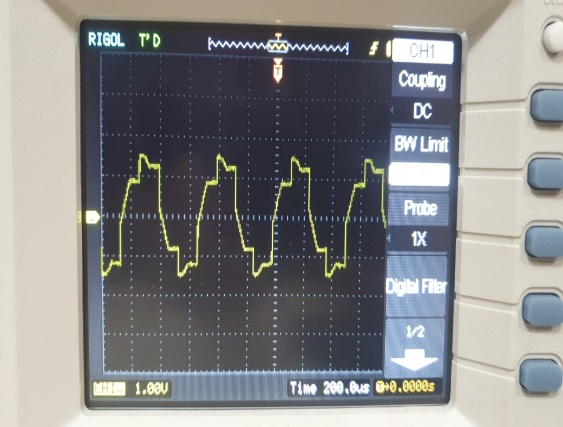
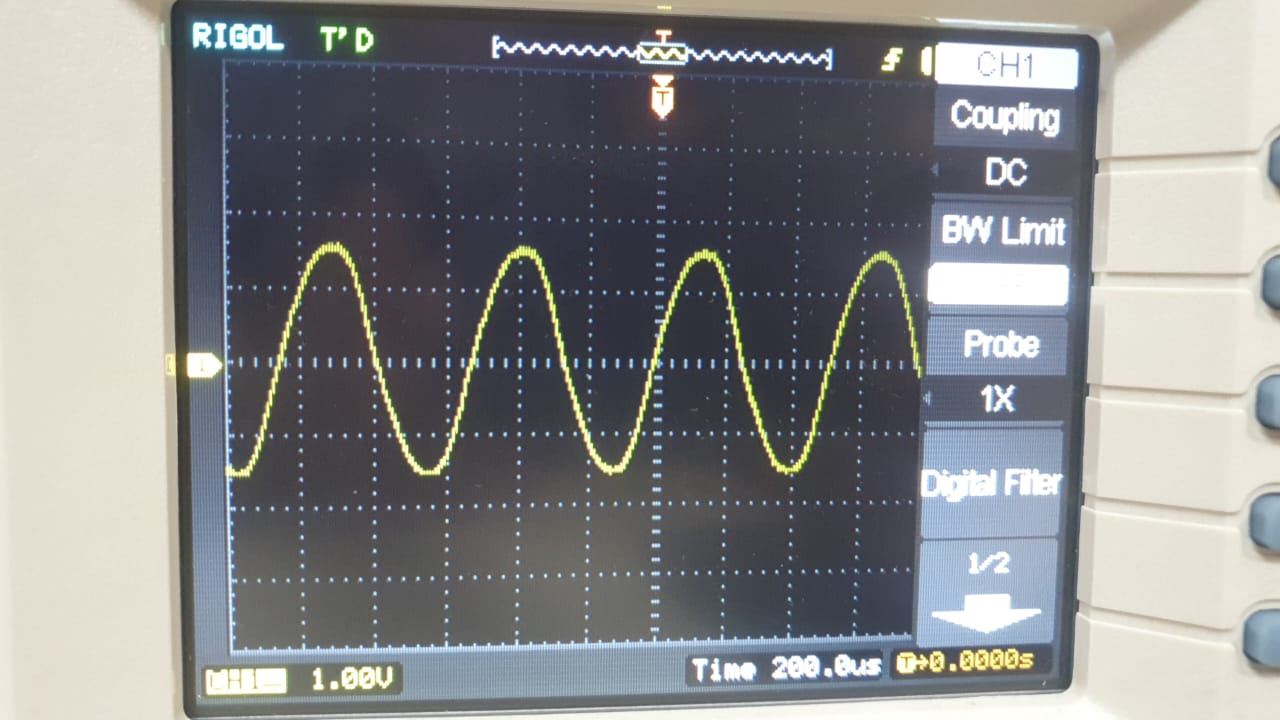
 

Frequency 2khz:

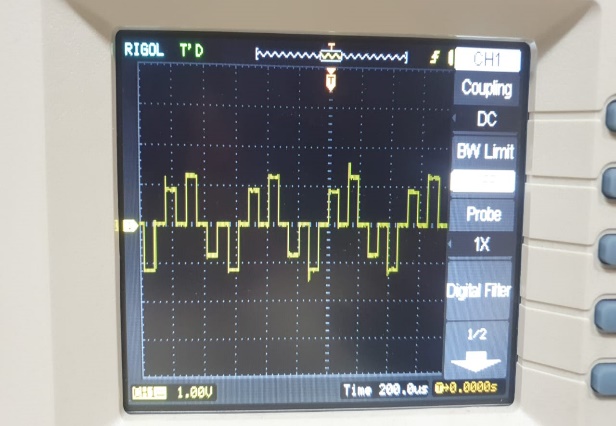
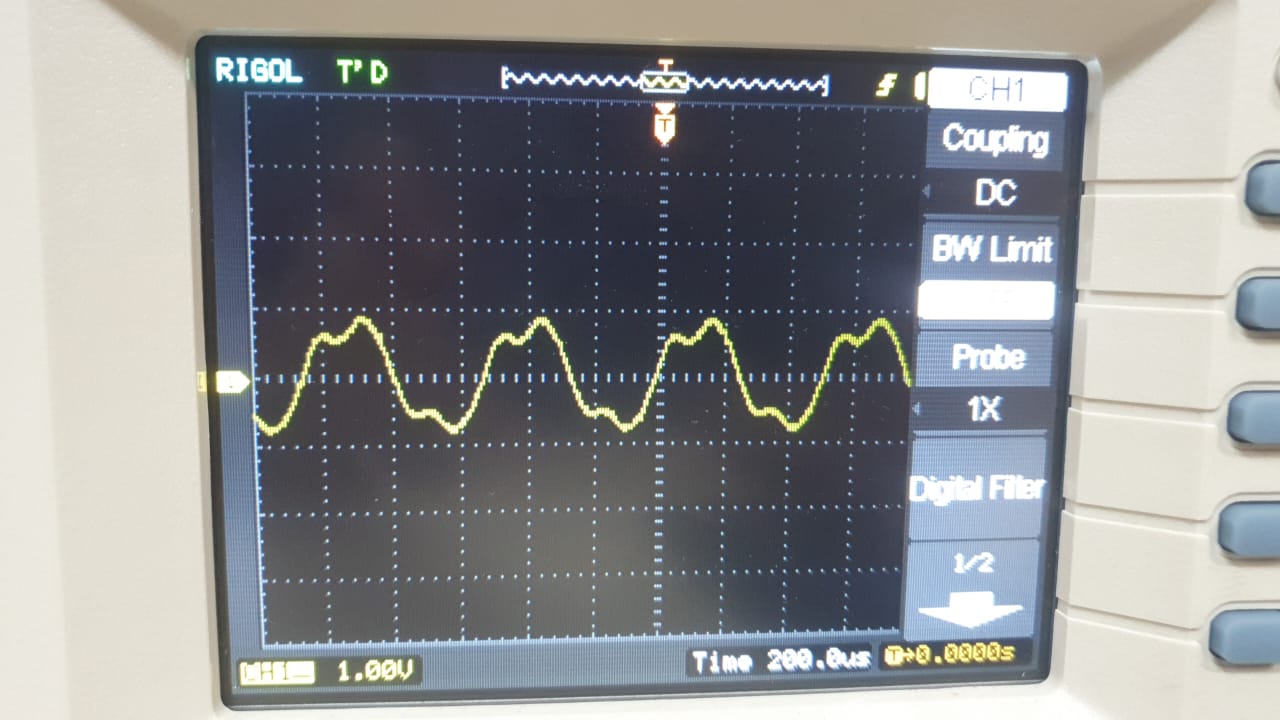
Natural Sampling

Sample hold

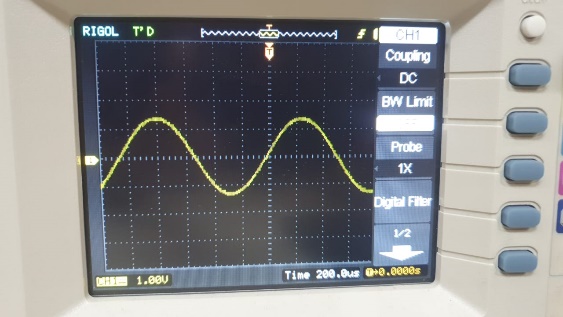
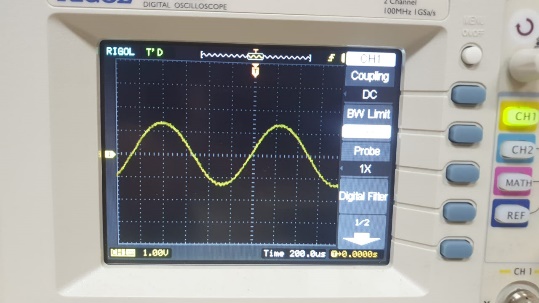
Flat top

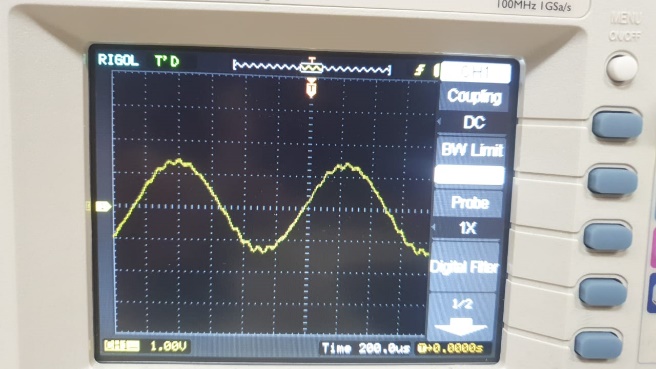
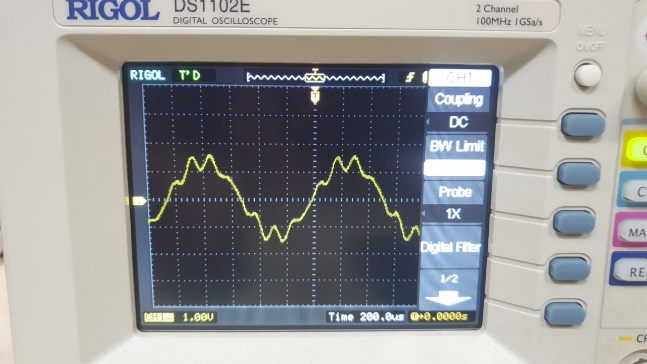
EXERCISE 2:

Natural 1khz

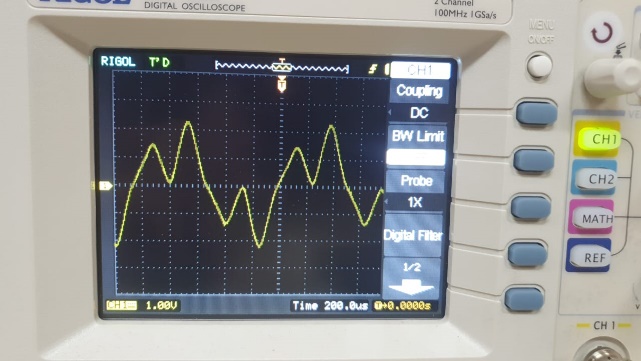
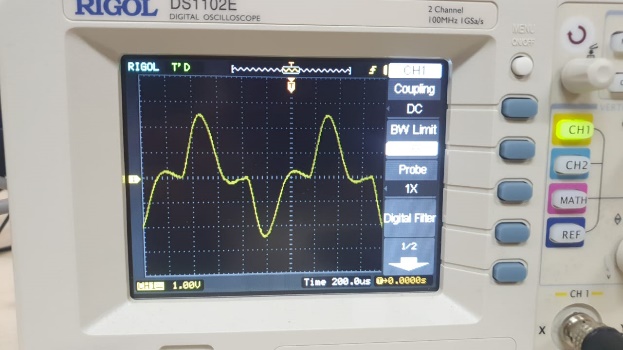
64 Khz and 32 Khz

16Khz and 8Khz

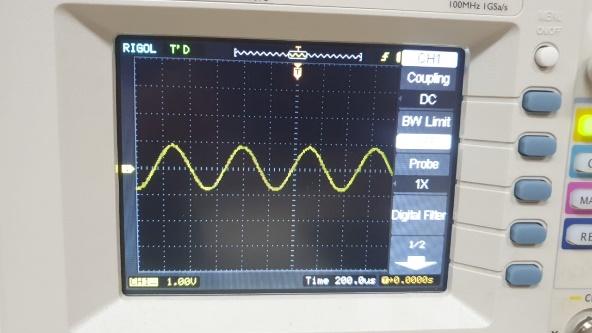
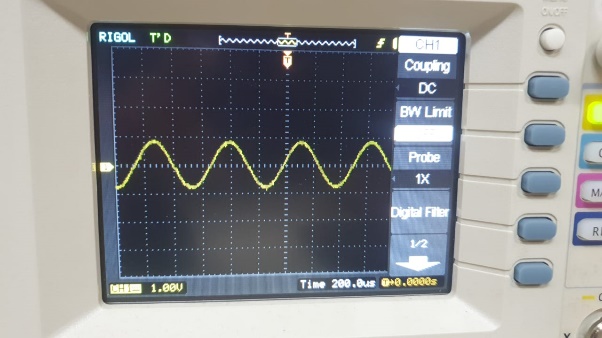
 

4Khz and 2Khz

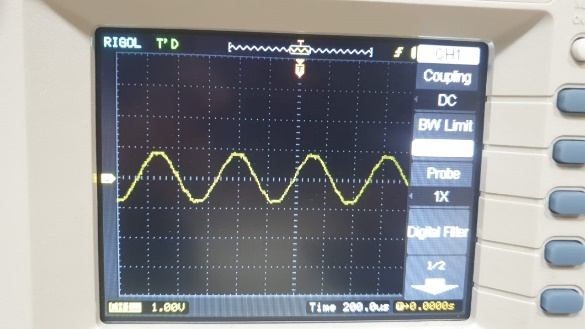
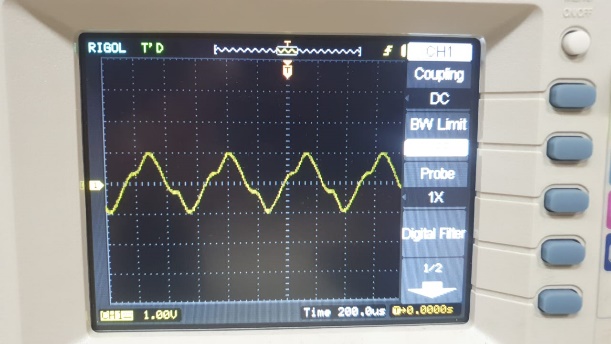
 

Natural 2khz

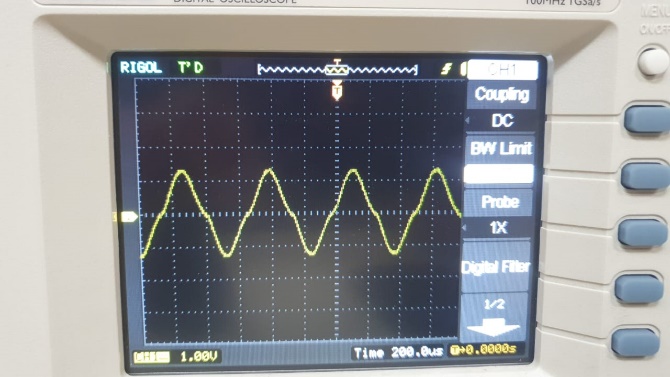
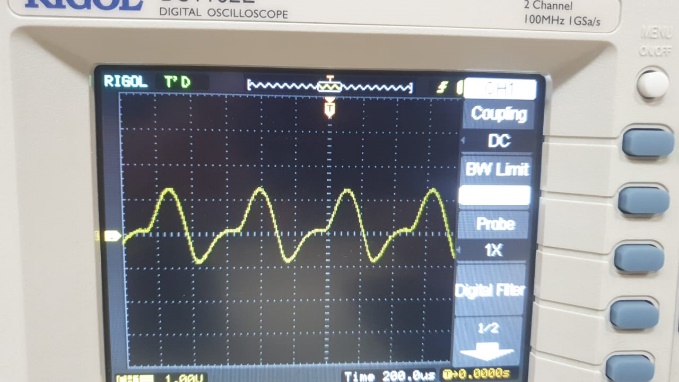
64 Khz and 32 Khz

16Khz and 8Khz

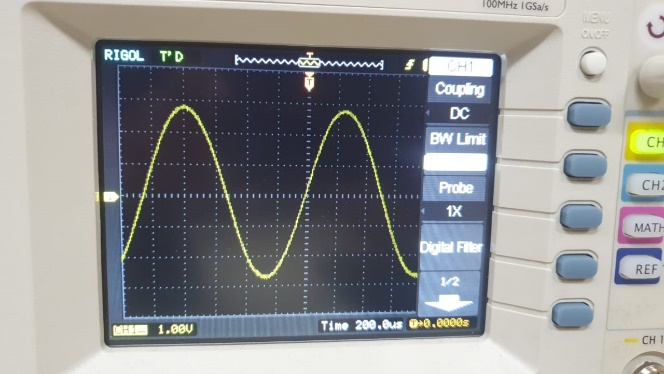
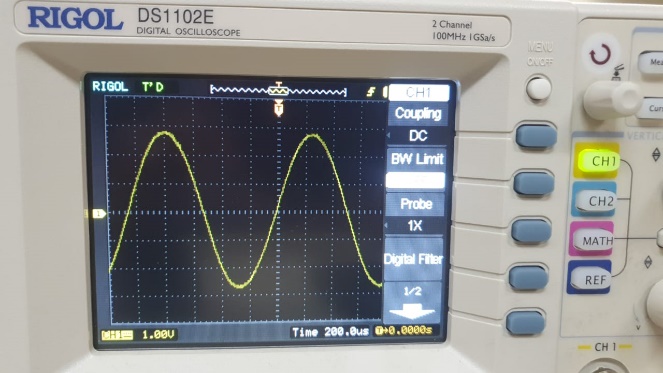
 

4Khz and 2Khz

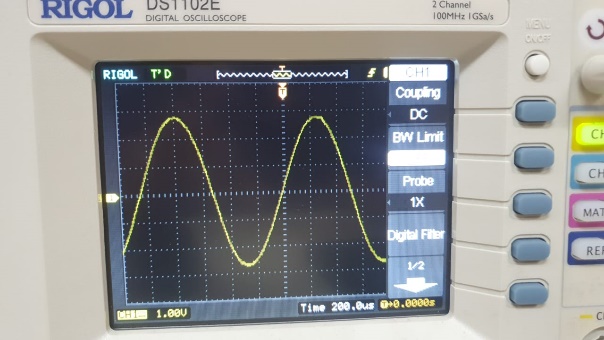
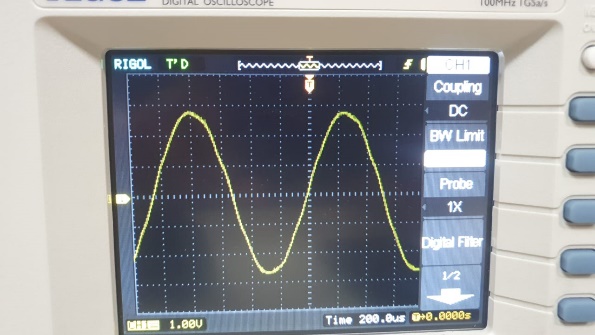
 

Sample and hold 1khz

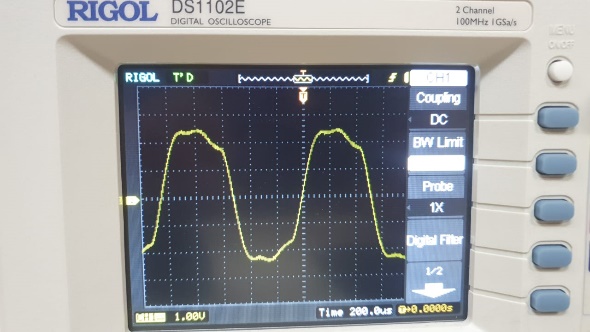
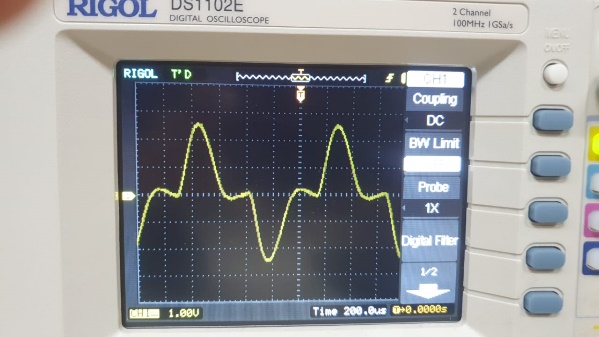
64 Khz and 32 Khz

16Khz and 8Khz

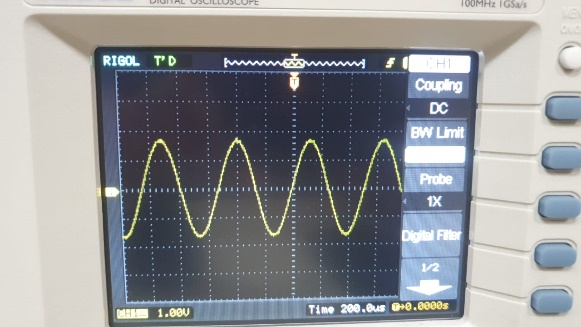
 

4Khz and 2Khz

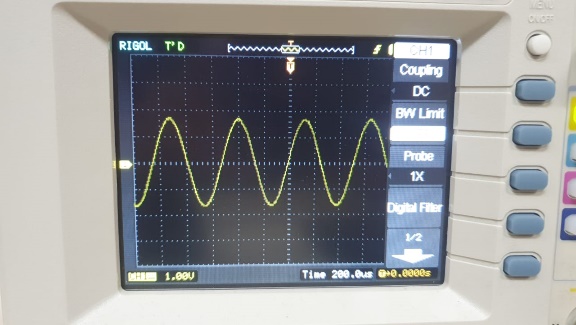
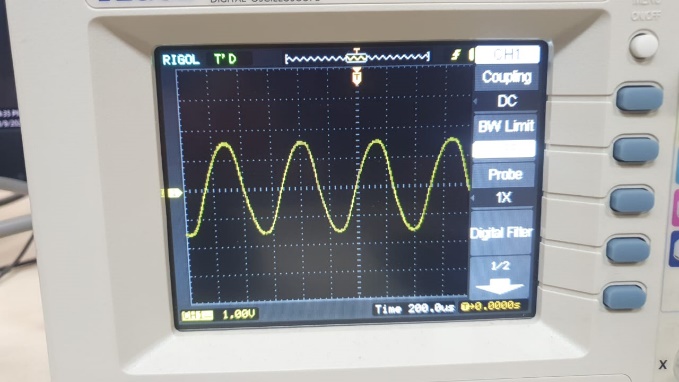
 

Sample and hold 2khz

64 Khz and 32 Khz

16Khz and 8Khz

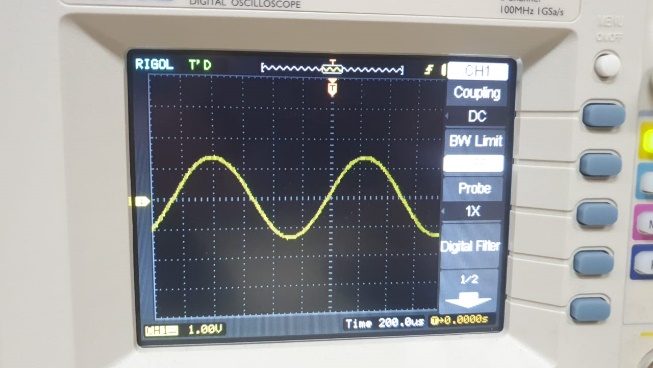
 

4Khz and 2Khz

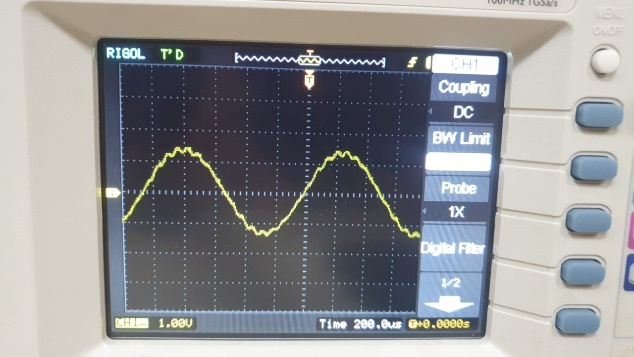
 

Flat top1khz

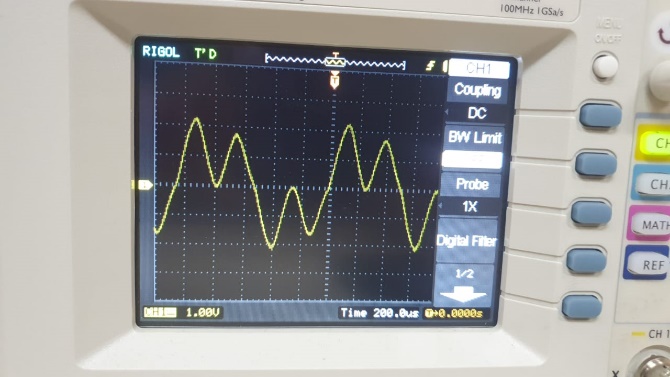
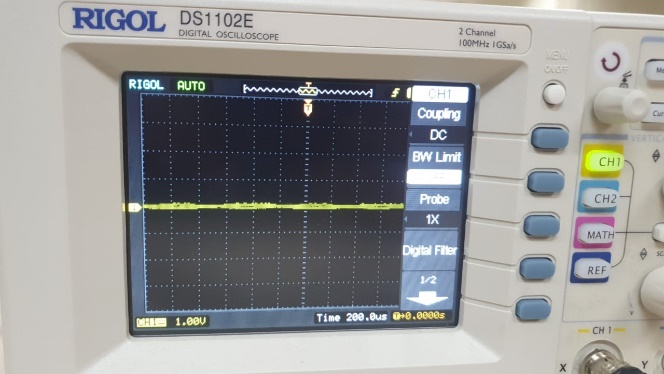
64 Khz and 32 Khz

16Khz and 8Khz

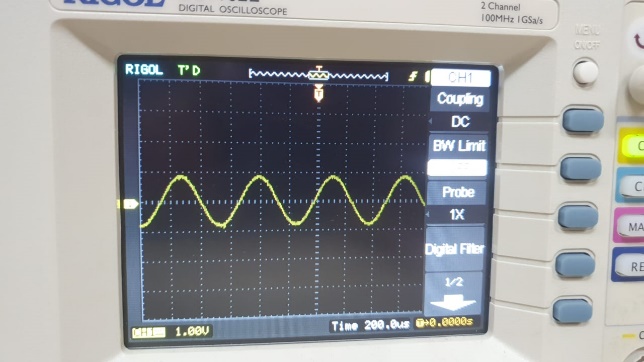
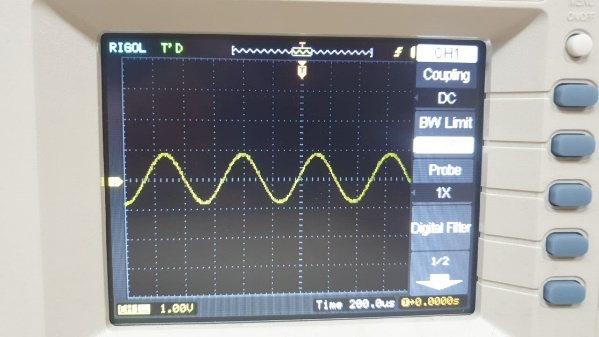
 

4Khz and 2Khz

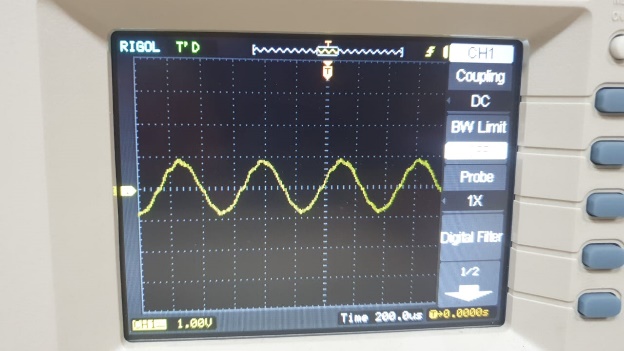
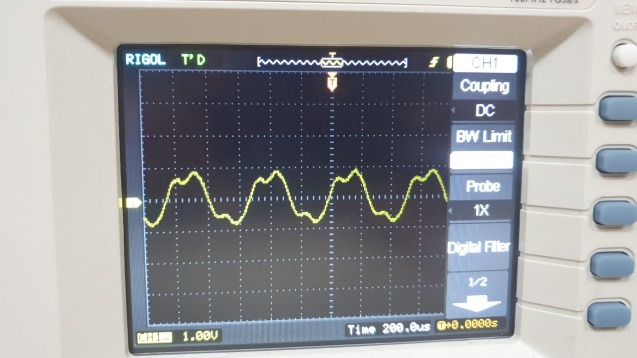
 

Flat top 2khz

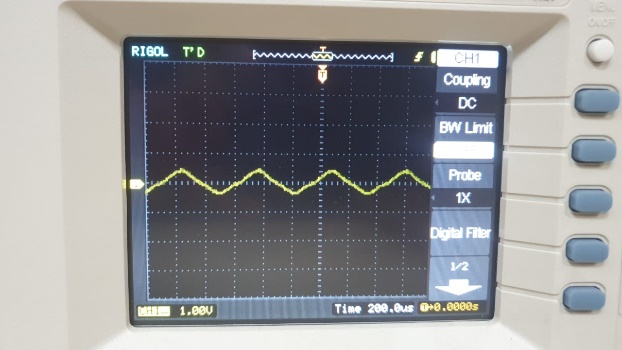
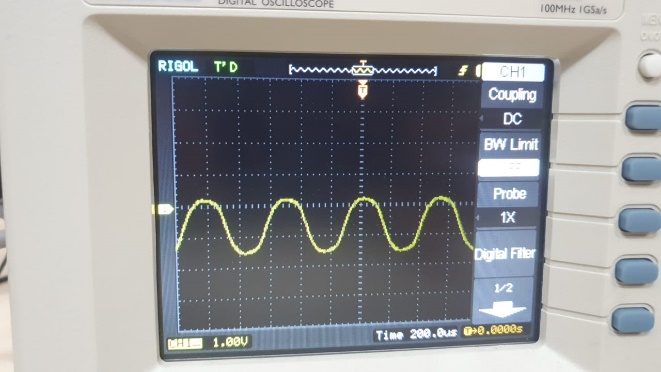
64 Khz and 32 Khz

16Khz and 8Khz

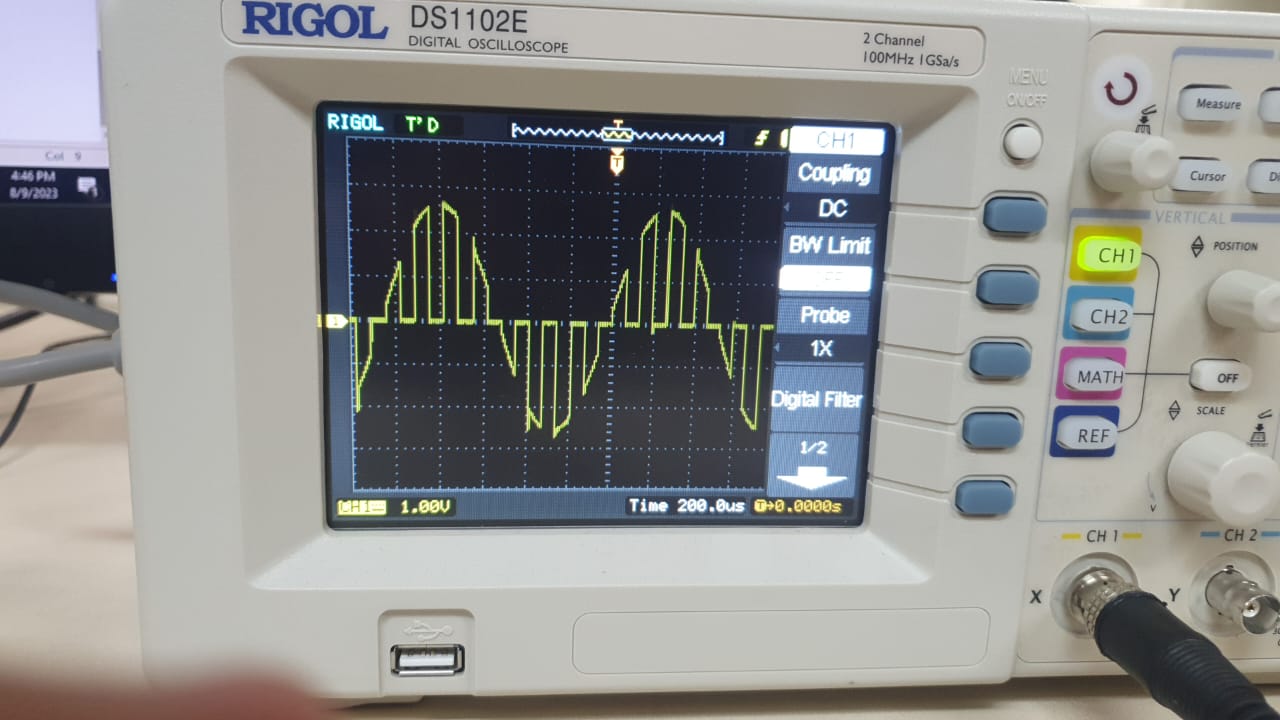
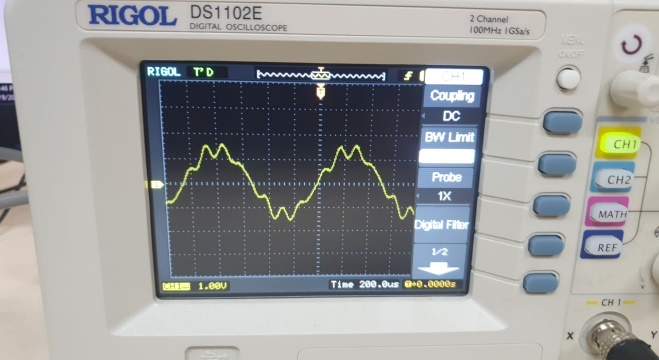
4Khz and 2Khz

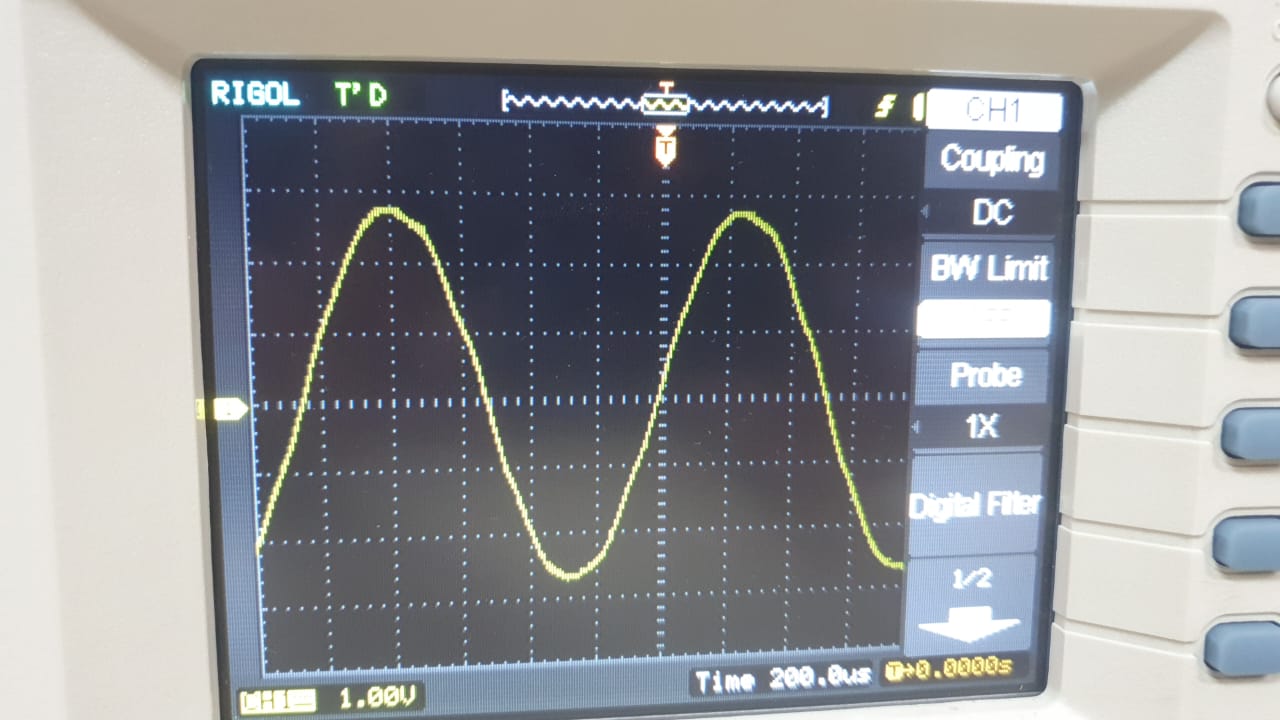
EXERCISE 3:

4th Order 1Khz

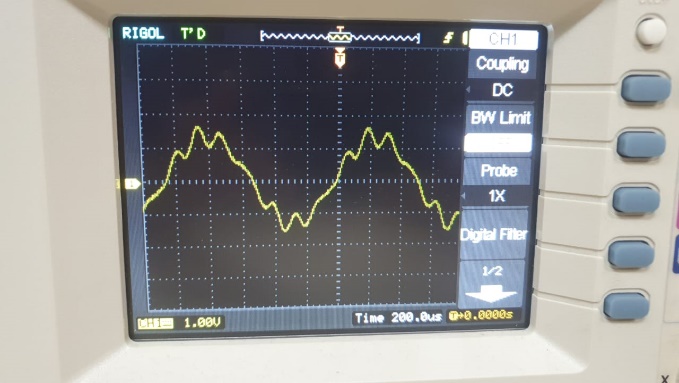
Natural

Sample hold

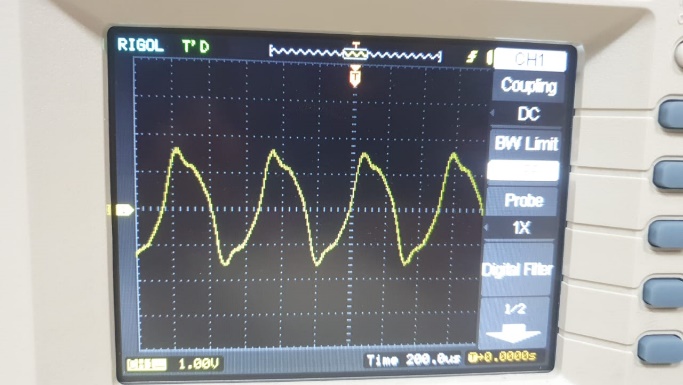
 

Flat top

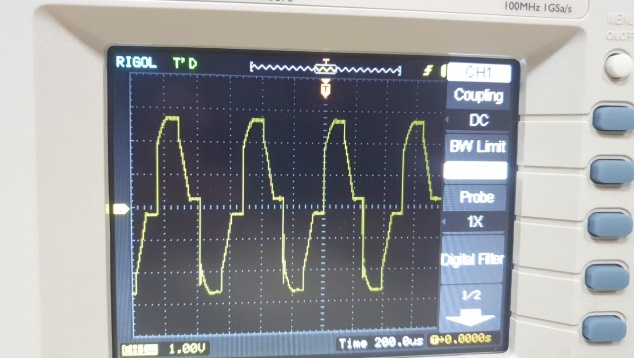
 

4th Order 2Khz

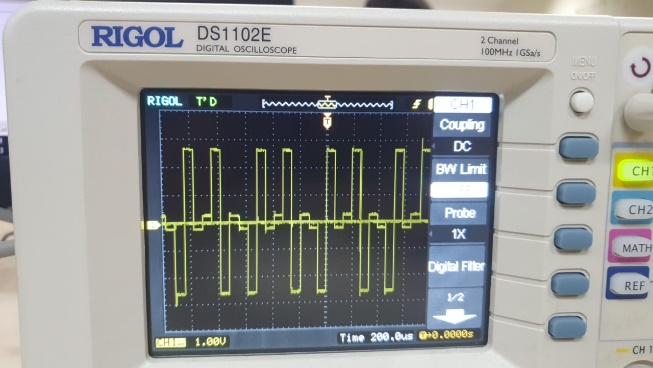
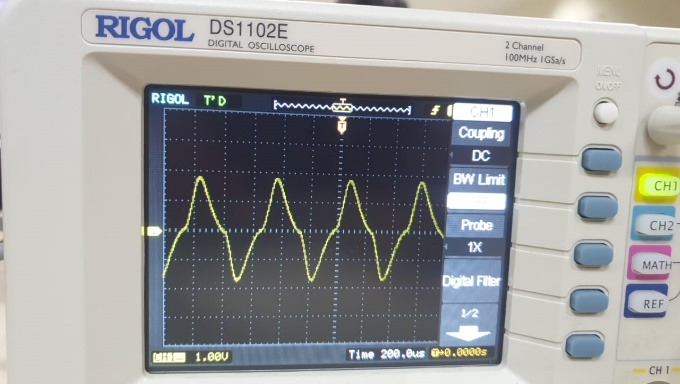
Natural

Sample hold

Flat top

Matlab code is as follow: