Expt. No..... Date .....

Code :-

Output :-

Result :- Thus generation of amplitude modulation is performed.

Experiment :- 2

Expt. No..... Date .....

Aim :-

To study the sampling theorm.

Apparatus Required :- P.C, Matlab software.

Theory :- Sampling theorm provide the basis for transmitting analog signal by using digital technique.

Sampling theorm may be stated in two parts.

(1) A band limited signal having no frequency component higher than that of fm-Hz is fully described by it's sample value at the equal interval less than or equall to 1/2 th sec part. This statement is in frequency domain.

(2) A band-limited signal having no frequency components higher than fm-Hz may be fully recovered from the knowledge of it's sample taken at rate atleast 2fm sample per sec. This statement is in time domain.

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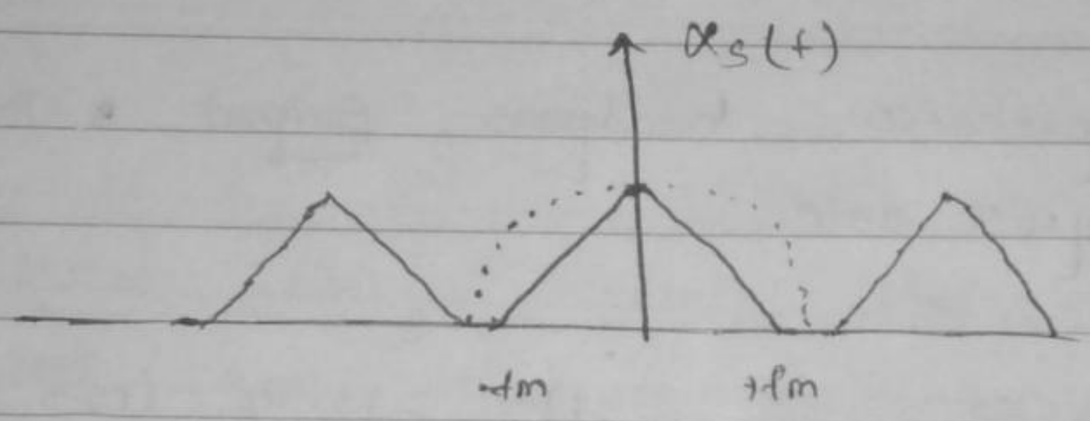
(i) Over Sampling ($f_s > 2f_m$) or ($T_s < \frac{1}{2f_m}$ sec)

Oversampling is the process of sampling a signal at sampling frequency significantly higher than nyquist rate. Theoritically a bandwidth signal can be fully recored if sampled at nyquist rate or above.



(ii) Critical Sampling ($f_s = 2f_m$ or $T_s = \frac{1}{2f_m}$)

only ideal LPF can be used for reconstruction because when practical LPF is used some extra frequency components are present which cause distortion.