Q1. How many of you are Sophomores of EE?

Q2. How many of you are now taking

신호
반도체전자공학
디지털시스템설계
확률및통계, &
졸업설계

Q3. How do you rate the load of this semester?

1. underloaded
2. properly loaded
3. Overloaded

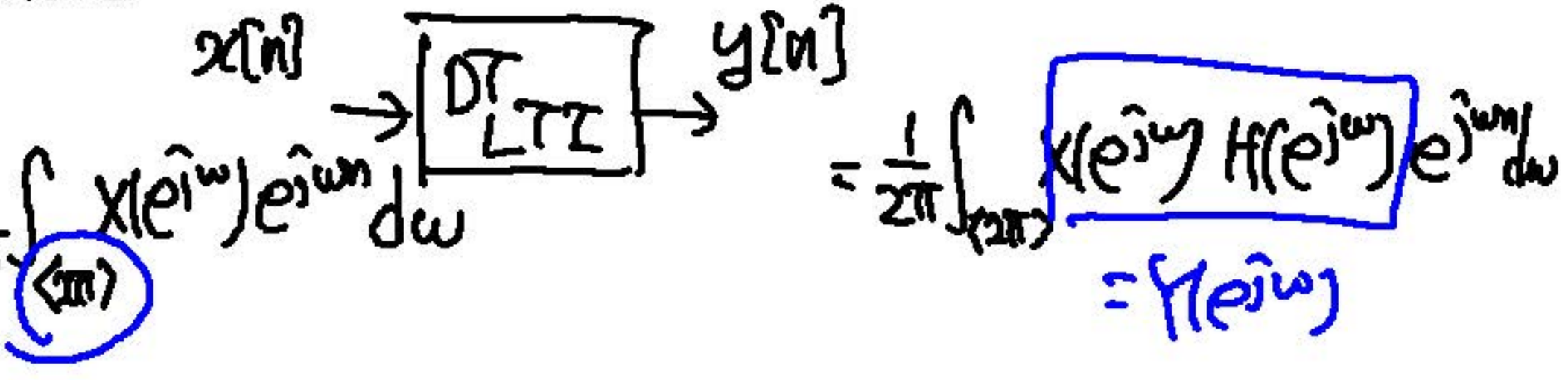
Q4. How do you rate ABC 신입생세미나 last year?

EECE 233 Fall 2014 Lec. #22

Announcements

1. Quiz, MATLAB on next Friday 9:30-10:45
2. Re-taking midterm exam #2 & ≤ 1 hr 30 min.
   ≤ 15 min.
   Midterm #3 on next Friday 19:30-24:00

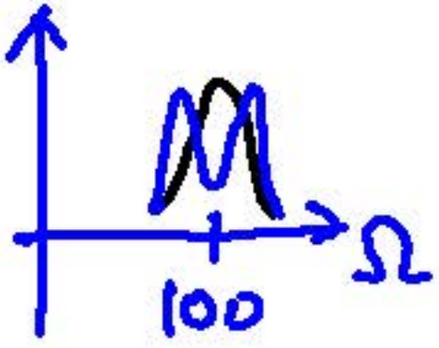
Review



Preview

12 ← Today.

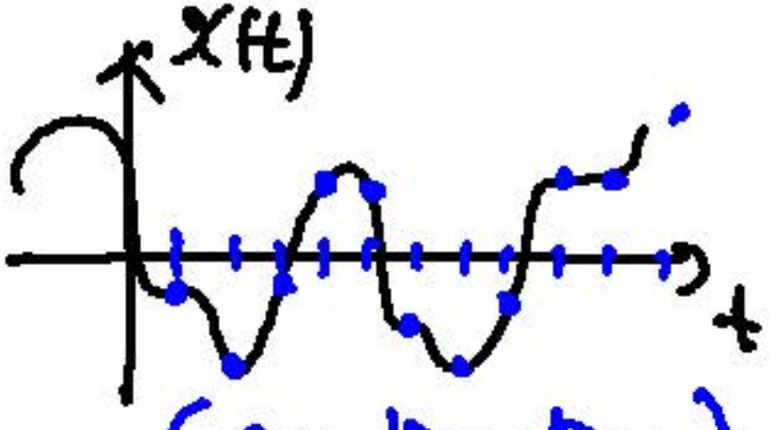
Note 13
14
15
) Laplace TF, LCCDE, CT LTI



Note 16
17
) Z-TF, LCCDE, DT LTI

DAC
ADC

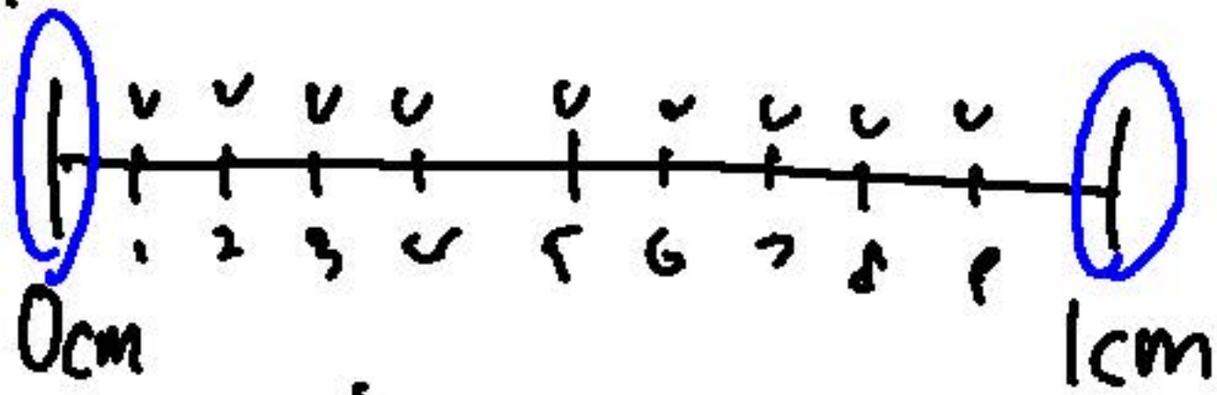
Note 18
19
) Sampling



(quantization)

Note 20
21
) Modulation

Q1.



$\frac{1}{10}$.

Q2.

-1. $(10^1, 2\times10^2)$

-4. $(2\times10^3, 3\times10^3)$

Q3:- $(10^0, 10^0)$

-2. $(1.1, 10^1)$ ∝)

$(2, 10^1)$

1. 10

2. 9

3. 8

4. 7

1. 10

2. 9

3. 8

21. 7

Save SOS

- $z = re^{j\theta}$ $\quad r \geq 0$, $\quad \theta \in [0, 2\pi)$

$r = |z|$ absolute value
magnitude . (amplitude)
module

$\theta = \angle z$ phase
angle

- $Y(j\omega) = |Y(j\omega)| e^{j \angle Y(j\omega)}$

$$Y(j\omega) = H(j\omega)\,X(j\omega)$$

$$= |H(j\omega)|\, e^{j\angle H(j\omega)} \cdot |X(j\omega)|\, e^{j\angle X(j\omega)}$$

magnitude response

$$= |H(j\omega)| \cdot |X(j\omega)|\, e^{j(\angle H(j\omega) + \angle X(j\omega))}$$

$a^m \cdot a^n = a^{m+n}$

[m/s] meters per second.

kilo 10^3

meter

deci 10^{-1} derade 10年

centi 10^{-2} century 100年.