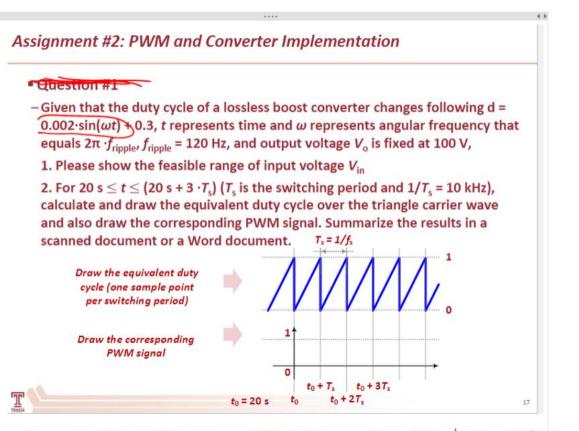
Robert Bara Assignment 2:

Saturday, February 12, 2022

1:24 PM



1) For a 1300st conveyor, the trans he function be = 1-D

=> VIN = 100/CT- (0.0025in (24071+)+0.35)

=> Vin = 1000 - 0-2 5:11 2407 13 - 30

-> Vin = 70r - 0.2 sinc 240 TtSV

Therefore Since the amplified will be a peak vollage.

Vin rangus fon [70v-0.2v] = 69.8v and

[70v + 0.2v] = 70.2v s translating

to 69.8v & vin & 70.2v or

O & vin & 1 at a

frequency of Sin(24017+) ~ Sin(754+)

dependent on time.

2) For $205 \le + \le (205 + 375)$ => $205 \le + \le (205 + 3(\frac{1}{1016H2})$ => $205 \le + \le 205 + .003$ => $205 \le + \le 20.0035$

From the Duty (Yelz

b= .002 sin(240 TI t) t. 3, the graph will always

be amplifus by .002 and shiftes up.3. Since

the signal is a lineway there vill be a positive and

negative peak, respectively at -.002 \(\frac{1}{2}\) v\(\frac{1}{2}\).002, therefore

when including the Shifts, the sineware will peak at

0.002 t.3 = .302 and

-0.002 t.3 = .298

For a PWM implementation,

$$M = \frac{V_{\text{m now}}}{V_{\text{c rank}}} = \frac{.302}{1} = .302$$

