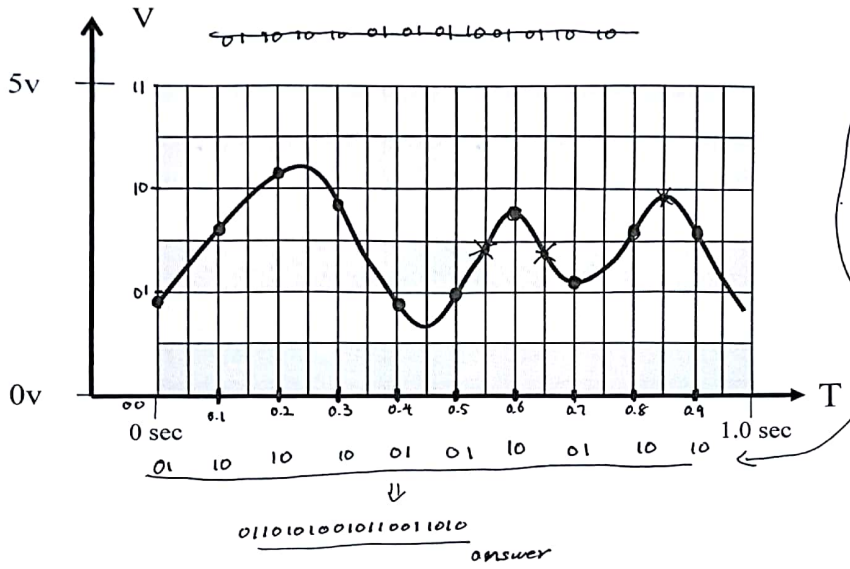
HW#1A: Digitize an Analog Signal

- Let sampling frequency = 10Hz (10 samples per second)
- Let quantization = 2 bits/sample 00 01 10 11
- Digitize signal from t=0 sec to t=1 sec only.
- Generate a stream of 1's and 0's as output.
- How many total bits will be generated (in one second)? 10 × 2 = 20 bits
- Hint: Draw a grid (use evenly–spaced vertical lines and horizontal lines).
- Hint: See previous slide "How is a CD Created?" for an example.



You may edit this slide in PPT and save and submit. Add quantization values on vertical axis and time values on horizontal axis and show quantization points. (Alternately, you may print out, modify with pen, and scan.)

The lowest quantization level should correspond to 0 volts and the highest quantization level should correspond to 5v.

You may copy and paste this!