

100%

Digital Electronics

EE → 5 Marks
ECE → 8-10 Marks

- ① Number System & codes
- ② Logic Gates - EE
- ③ Boolean Algebra & K-Map - EE
- ④ combinational circuits - EE
- ⑤ sequential circuits - EE
- ⑥ Data converter - EE
- ⑦ logic family
- ⑧ semiconductors memories

Books:

Morris Mano
Anand Kumar

Q.B.

Koncept
PYEE/ECE
Kavada

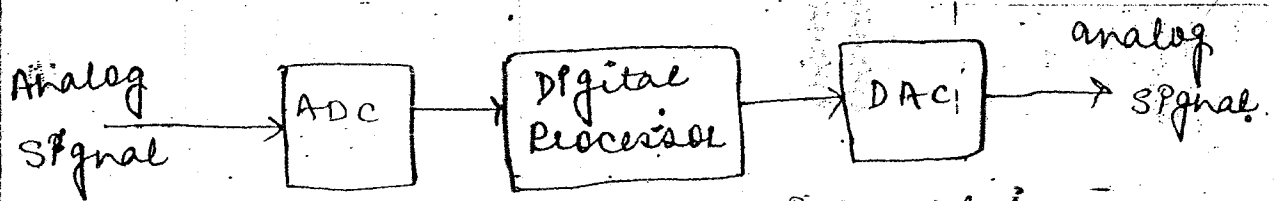
① Number System :-

A Number System defines a possible set of symbols which are available and can be used to represent a certain quantity.

ex 0-9 digits; A-Z alphabets.

Analog signals are those which are analogous to real world signals where as digital signals are those where there are only finite no. of possibility.

Why digital?



1. Digital system are easier to design

② Availability of up

- 3. more noise immunity
- ⊕ Accuracy & Precision are higher.

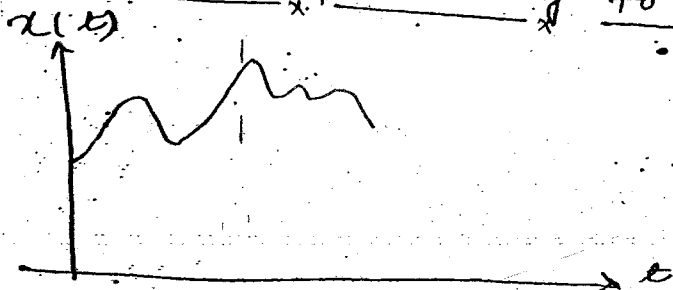
Analog

1.3456 B → Transmitted
 1.346 → Received

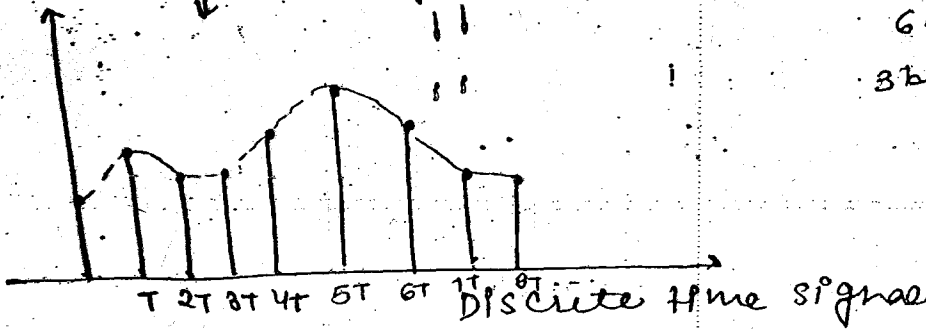
Digital

1, 2, 3, 4, 5, 6 : only 6 digits level
 4 → Transmitted
 4.3 → Received
 ↳ round off to 4.

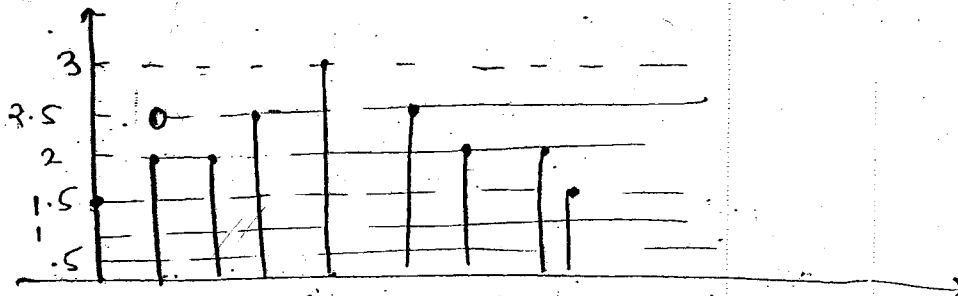
conversion of analog to digital →



↓ Sampling



n - digits of ST
 ST 2^n code possible (level)
 6 - level
 $2^2 = 4$ level
 3 bit $2^3 = 8$ level



Quantization

Digital signal

levels define ST & 1

integral multiple of 0.5