Syllabus:

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1) BASICS OF SIGNAL SYSTEM:
2) BLOCK DIAGRAM & SFG
3) Time Response
4) RH Criteria & Jury Criteria.
5) Root Locus
6) FREQUENCY RESPONSE
7) BODE PLOT
8) NYQUIST PLOT
9) STATE SPACE
10) Compensator & Controller
11) Mathematical Modelling.

RESOURCES

→ Class Notes: → Rough
→ printout :

10:30 → 11:30. 1 Revision

1 Revision

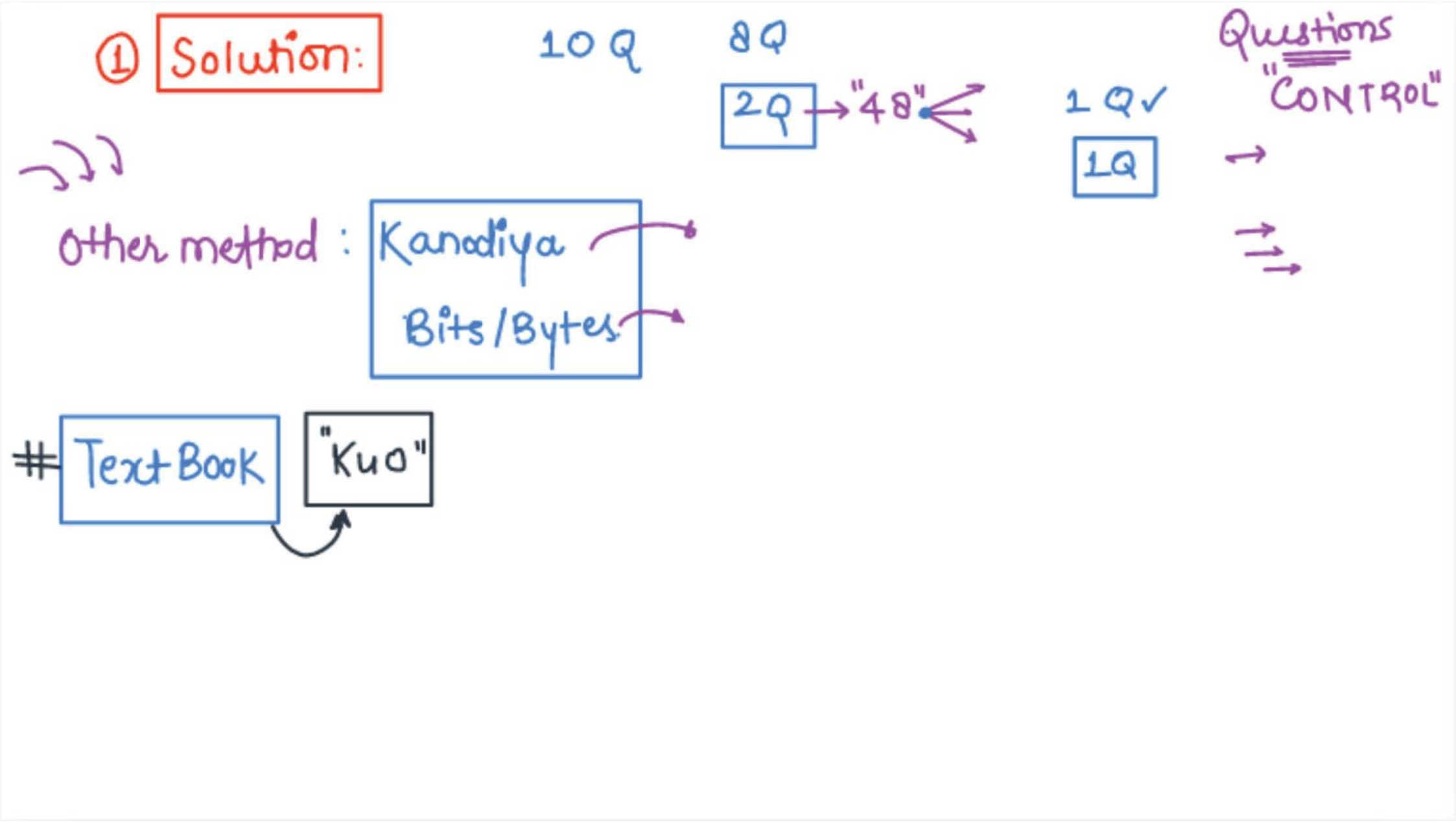
→ DPP

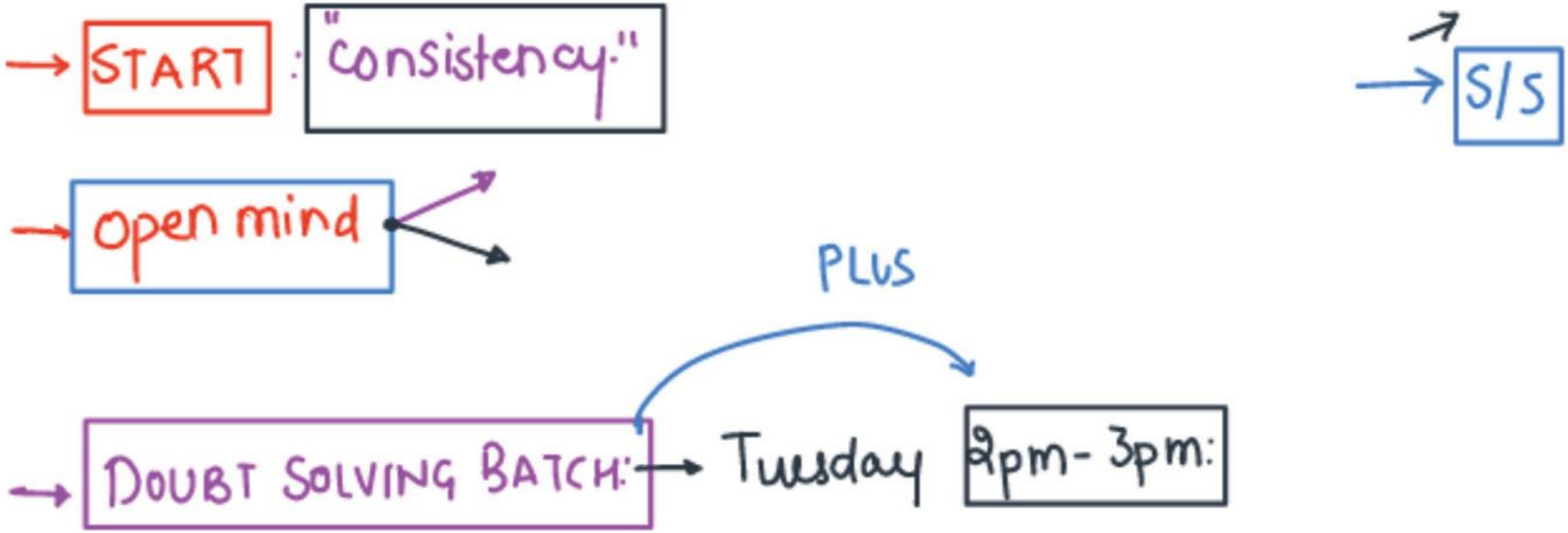
① ② ③ 1, 2

→ PYQ → EC
EE
IN
→ GATE LAST 25 YEAR.
→ obje/conventional.

10 → 9 Revision

EC
EE
→ "LAST 15 year" → objective


① Solution:
10 Q
8 Q
2 Q
"48"
1 Q ✓
Questions
"CONTROL"
1 Q
Other method :
Kanodiya
Bits/Bytes
Text Book
"Kuo"


START : "consistency"
S/S
open mind
PLUS
DOUBT SOLVING BATCH:
Tuesday
2pm - 3pm:

Linear Control System

"SIGNAL":

1) Unit Impulse Signal:

1) $x(t) = \delta(t)$

2)

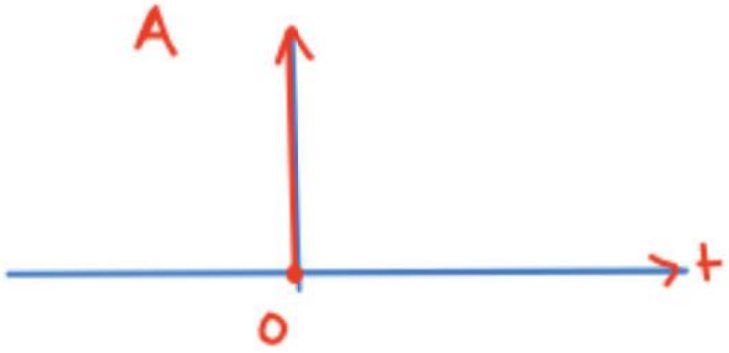
$$\begin{cases} \delta(t) = 0 & t \neq 0 \\ \delta(t) \neq 0 : & t = 0 \end{cases}$$

$t = 0 \rightarrow \delta(t) \rightarrow \infty$

$$\int_{-\infty}^{\infty} \delta(t)\,dt = 1$$

2) Impulse Signal:

$x(t) = A\delta(t)$



$$\begin{cases} A\delta(t) = 0 & t \neq 0 \\ A\delta(t) \neq 0 & t = 0 \end{cases}$$

$$t = 0 \Rightarrow A\delta(t) \to \infty$$

NOTE: → Impulse Signals have constant Area

$$\int_{-\infty}^{\infty} A\delta(t)\,dt = A\int_{-\infty}^{\infty} \delta(t)\,dt = A$$

3) Unit Step Signal:

$x(t) = u(t)$

$$u(t) = \begin{cases} 1 & t \geq 0 \\ 0 & t < 0 \end{cases}$$

4) Step Signal:

$$x(t) = A\,u(t)$$

NOTE: "step signals have constant amplitude.

5) Unit Ramp Signal:

$$x(t) = 1 \cdot t\, u(t)$$

$$x(t) = \begin{cases} t & t \geq 0 \\ 0 & t < 0 \end{cases}$$