Physics

① <u>unit and dimension</u> :-

$$l = 5 \text{ meter}$$

<u>magnitude</u>
(numerical value)

$\times$ $\times$

what is l ?

l is (length,)

<u>dimension</u>

<u>meter</u> c.m.

k.m. (units) ?

<u>length</u>
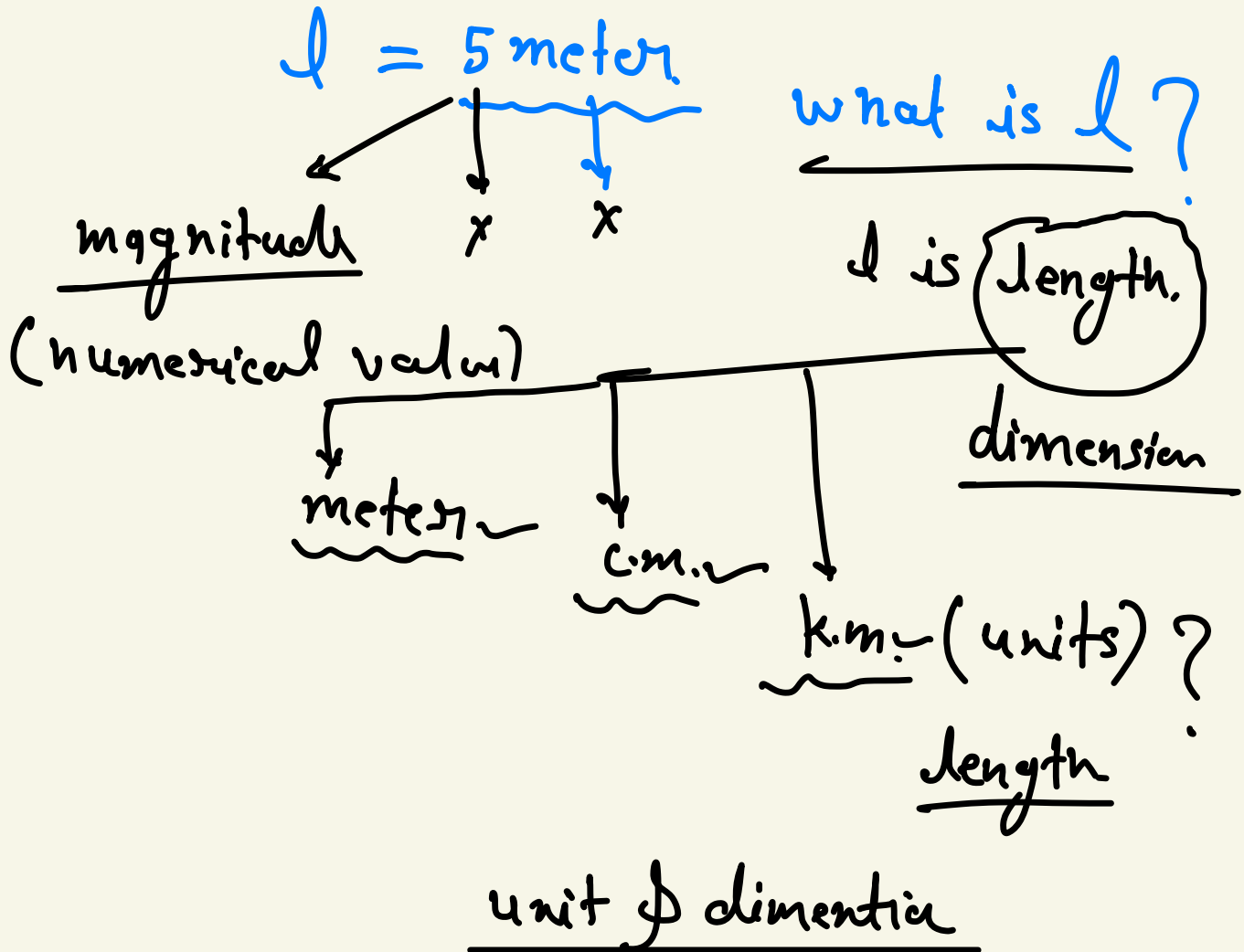
<u>unit & dimentia</u>

Physical quantity

All the quantities that can be measured directly or indirectly → phy quant

Eg. mass, force, length, current

Measurement

It is a process in which we compare the amount of phy quantity

P_hysical_ quanti_ty_

System In $\begin{cases} FPS \\ mks \\ SI \quad ? \\ cgs. \end{cases}$

which we measure the phy quanti_ty_

Sy-1 ① *

$$\begin{matrix} l \\ m \\ Tim \end{matrix} \begin{cases} M \longrightarrow m \\ K \longrightarrow kilog \\ S \longrightarrow Sec. \end{cases}$$

S_ys_2 $\begin{bmatrix} F \\ P \longrightarrow pound \ (cake) \quad 1P = 454 gm \\ S \end{bmatrix}$

Sys-3 $\left(\dfrac{S}{I}\right)$ International. system.

Sys-4

$C \longrightarrow cm$
$G \longrightarrow gm$
$S \longrightarrow Sec.$

Conversion

$1m = 100 cm.$ ⌣
$1kg = 1000 gm.$ ⌣

fundamental

7 basic
(indivisual)

(7) <u>length</u> — <u>meter.</u>

1. mass - kg.

2. Time — sec

3. Temp - kelvin.

4 Amound of :- mol
  Subs

5. <u>luminius</u> — condela.
    int

6. Elect curut - Amp

Derived

<u>Speed</u> $= \left(\dfrac{m}{sec}\right)$

<u>Acceloratin</u>
$= \left(\dfrac{m}{s^2}\right)$.

<u>force.</u>

<u>Pressure.</u>

Dimentional. formula (**home name**)

___Lenath.___ - meter - $[L]$ ✓

Time - $[T]$ ✓

mass - $[M]$ ✓

___

ampou (current) - $[A]$

(1) ___JEE___ :-

Speed $= \dfrac{m}{sec}$ $\dfrac{[L]}{[T]} = \dfrac{[M^0 L^1 T^{-1}]}{[L^1 T^{-1}]}$ ⟲

__imp__ [force] $= \left(\dfrac{kg\,m}{s^2}\right) = [M^1 L^1 T^{-2}]$

(2) __plank- const__ (chemistry)

$\left(E = \dfrac{hc}{\lambda}\right)$ (?) ⟶ __Speed of lik__

$h = ?$ ⟶ __wavelength__

↓ __Energy__

$$\text{Pressure} = \frac{F}{A} = \frac{M^1 L^1 T^{-2}}{L^2}$$

$$= M^1 L^{-1} T^{-2}$$

$$\underline{\underline{U}} \ \underline{\underline{b.u.}} \quad h = \underline{\quad\quad} ?$$

U
Ice.

(Puri) ———————— Kota.
Rough & Tough.

←←←⌐⌐⌐⌐⌐⌐⌐⌐→ **24 hour.**

Case.2 ////////
road   american.road
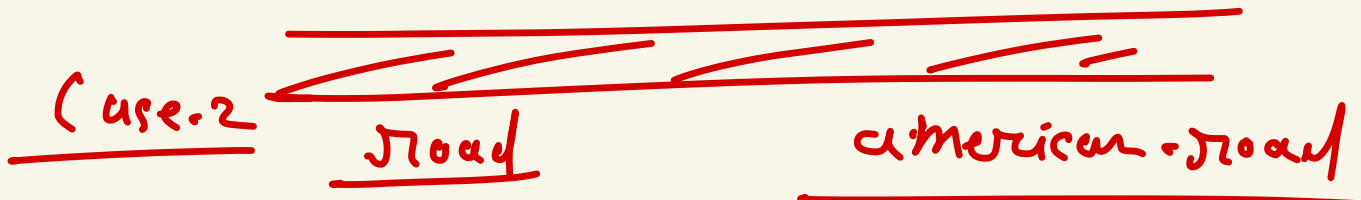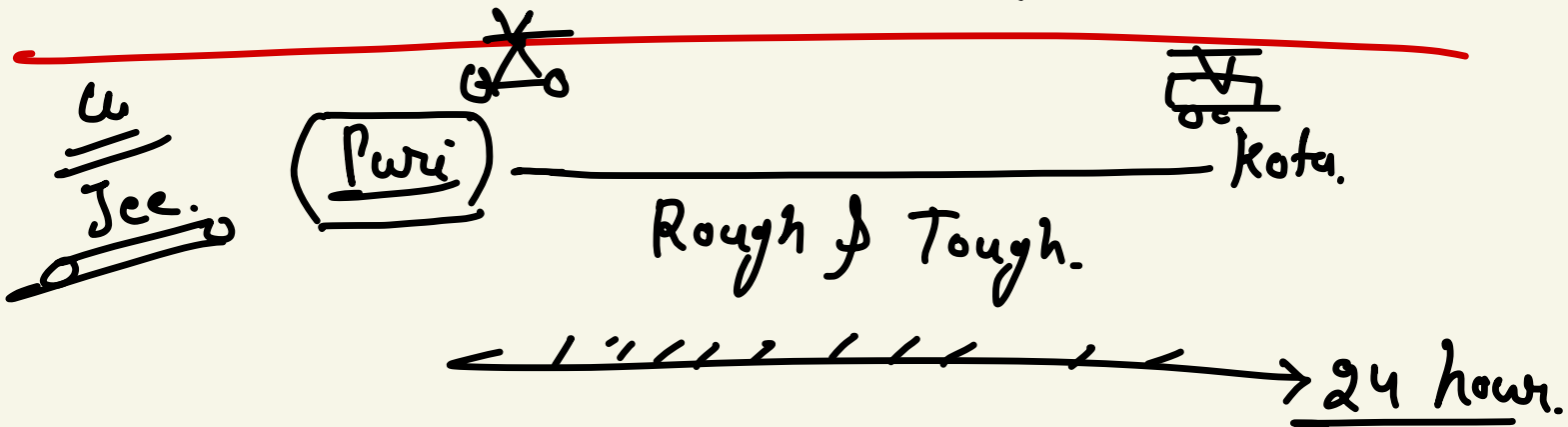
                                    20 hr.
Traffic? (a) ↓ the.   ————
         (b) ↑   4 hr
                         ————
         (c) const   road is
                        empty
         (d) no-comment

$$KE = \frac{1}{2}mv^2$$

ball $\overset{m}{\textcircled{}} \rightarrow v$

(Kinetic. G) $KE = \frac{1}{2}mv^2$

Qu! $\int$ other-comp :-

Jee.

$M \rightarrow$ mas.

$E \rightarrow$ Energy

Machine ----- $\Longrightarrow$ bullet (mass

$\frac{}{E_1}$ E_2 neglect)

$v \leftarrow \textcircled{M} \leftarrow$
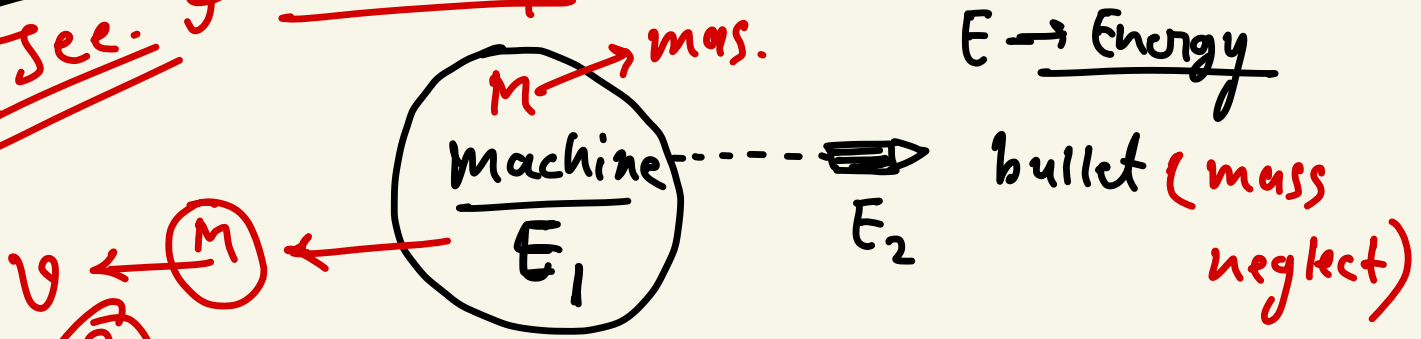
$\boxed{?}$ $\Longrightarrow$ find Remained Energy of

$\frac{1}{2}mv^2$ machine ?

$$E_1 \cdot E_2 = \frac{1}{2}mv^2$$

E_1 E_2

Qu2.

$\boxed{\text{10 rupee}}$

50 Vegetable

rupee

(5rup) $\leftarrow$

elder-bro. $\downarrow$ remained ?

$\frac{1}{2}mv^2$ $50 - (10 + 5) = 35$

Remained $\left[E_1 - \left(E_2 + \frac{1}{2}mv^2 \right) \right]$