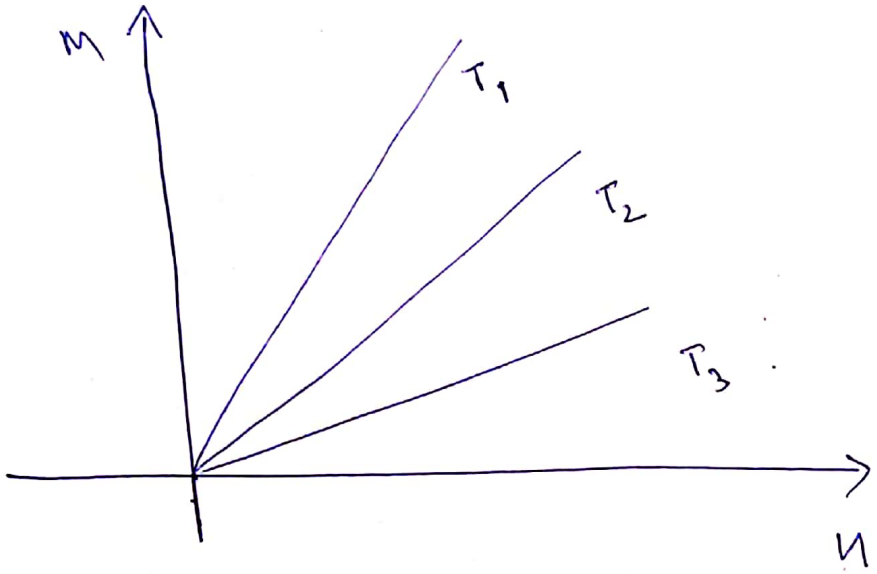
Harshit Mawandia 2020CS10348

Q3) a) Magnetic moment = $pl \sin 45°$

$= 10 \times l \times p \times \frac{1}{\sqrt{2}}$

$= pl$ where p is the pole strength and l is the length

b)



$T_1 < T_2 < T_3$

In paramagnetic substances, Curie's law is followed where $\chi = \frac{C}{T}$, so M decreases with increase in temperature.

Also with increasing H, M also increases as $M = \chi H$, so it is directly proportional.

B in paramagnetic substances are slightly greater than in vacuum as extremely weak interactions exist between neighbouring atoms.