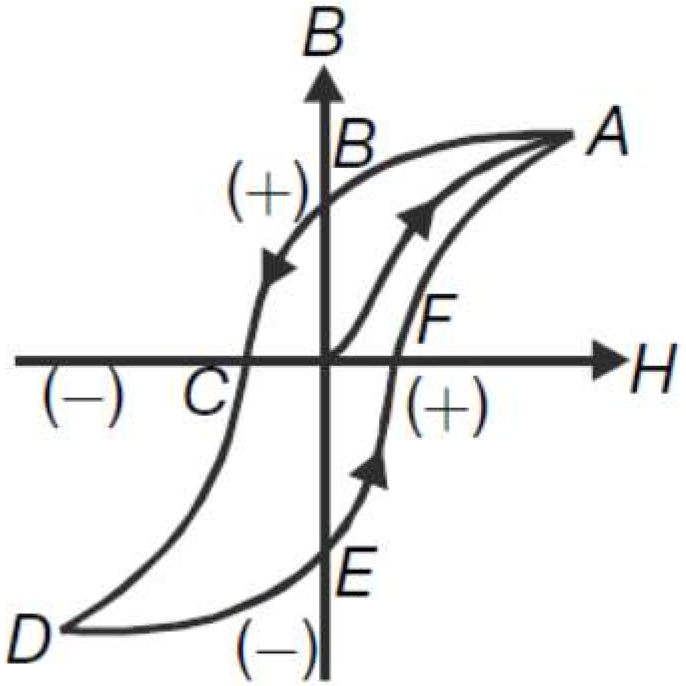
A ferromagnetic substance is placed in the vary- ing magnetising field H. The magnetic induction B is measure for various values of direct and reverse mag- netising field. Following graph has been plotted for B versus H. Choose the any wrong statement



(a) There is a limit of direct and reverse external mag- netising field at which the magnetisation and hence the magnetic induction saturates

(b) Even after removing the external magnetising field some residual magnetisation called 'retentivity' is left over the substance

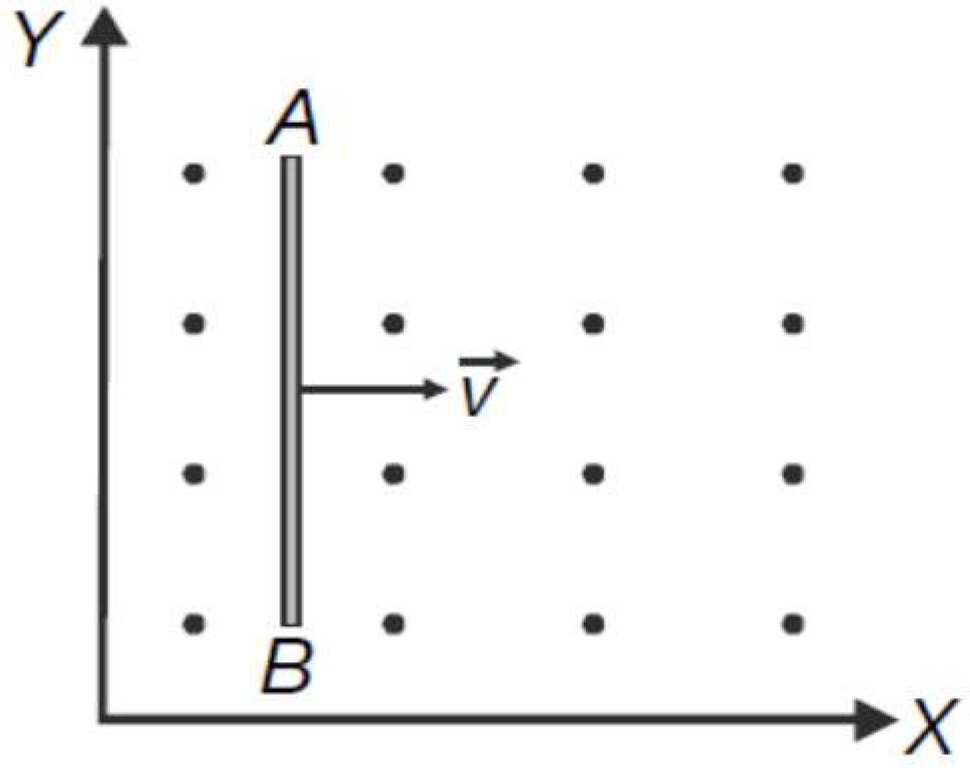
(c) On increasing the reverse magnetising field, the re- tentivity decreases to zero for a value of magnetis- ing field which is known as 'susceptibility'

(d) On increasing the reverse magnetising field the re- tentivity decreases to zero for a value of magnetis- ing field known as 'coercivity'

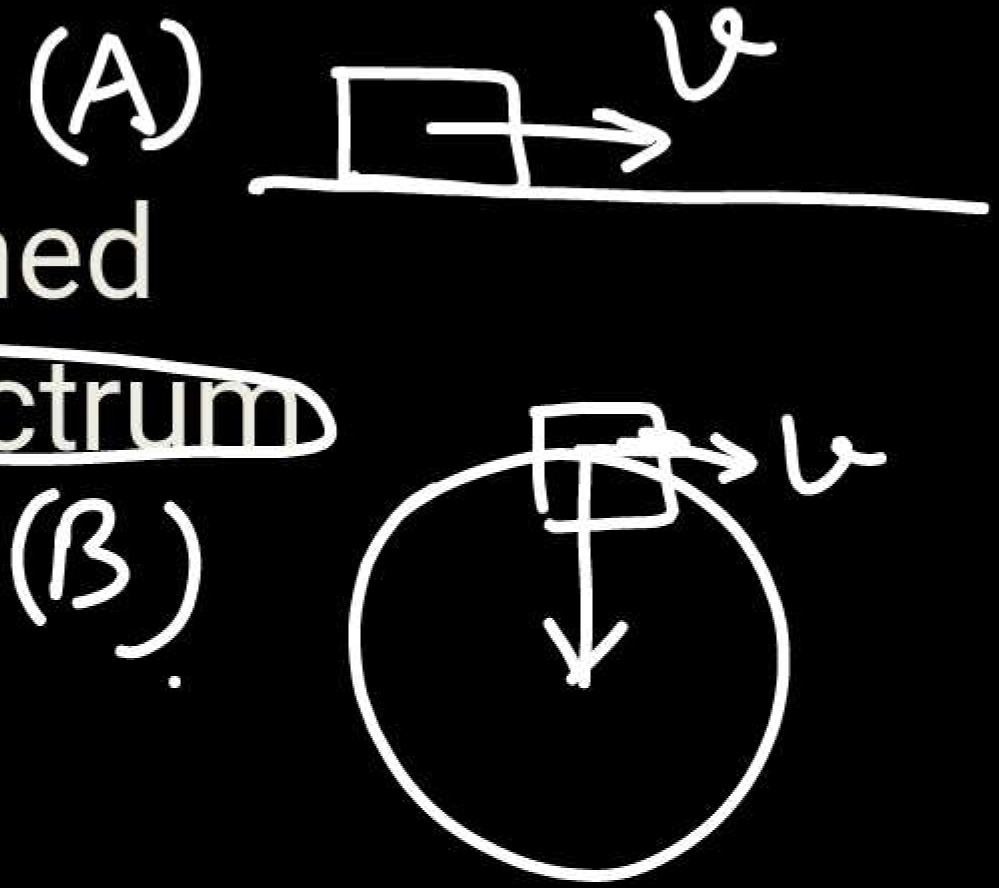
$B = \mu_0(I + H)$

A conductor rod AB moves parallel to x-axis in a uni- form magnetic field, pointing in the positive X-direction. The end A of the rod gets

(a) positively charged
(b) negatively charged
(c) neutral
(d) first positively charged and then-negatively charged



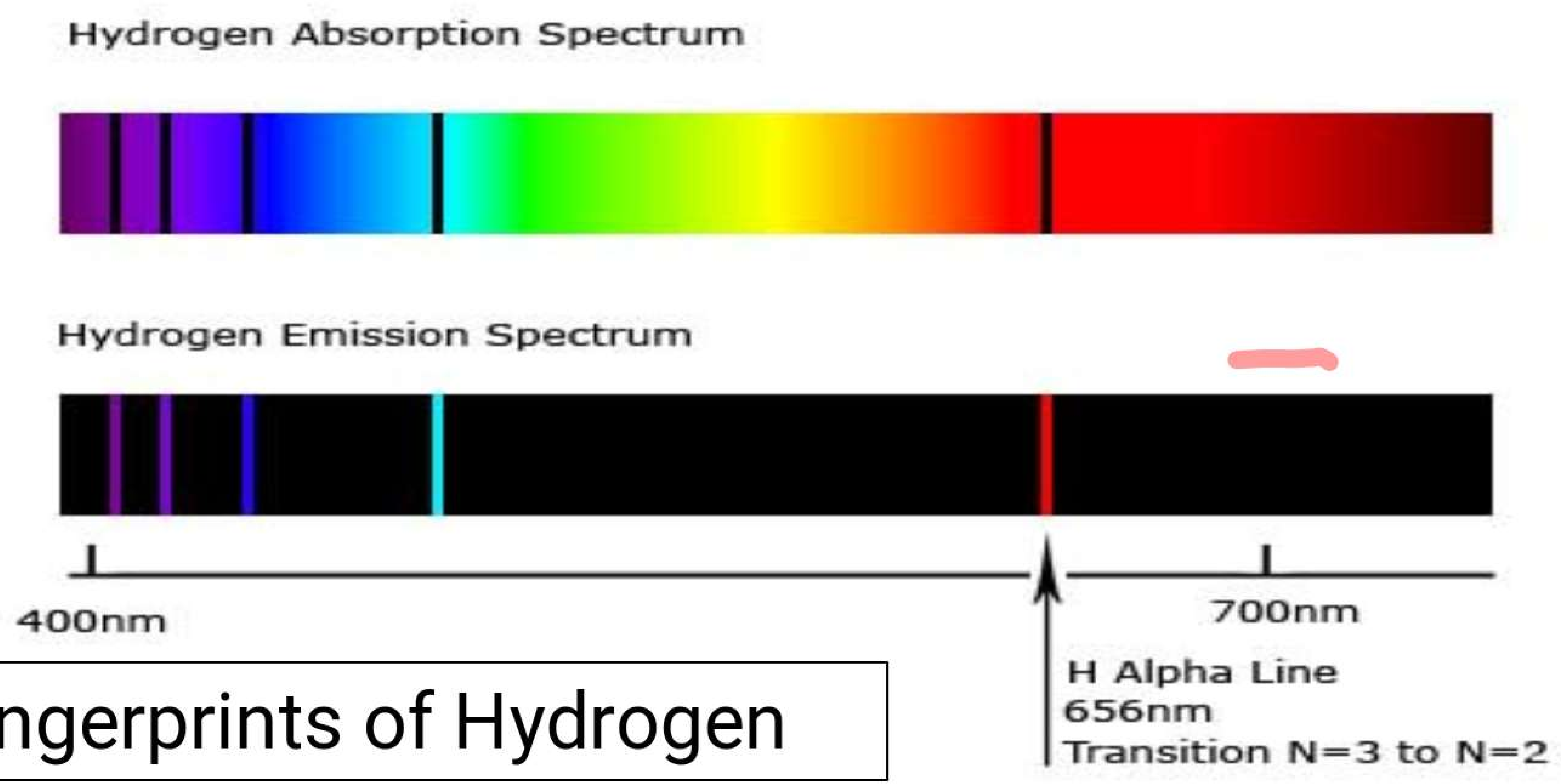
Drawbacks of Rutherford's Atomic Model



- Stability of the atom can't be explained
- Couldn't explain hydrogen (line) spectrum

- ~~*Repulsions between positively charged particles*~~
- *should explain atleast hydrogen's atomic structure*

Hydrogen Emission & Absorption Spectrum



Fingerprints of Hydrogen

Rydberg's Formula

Balmer

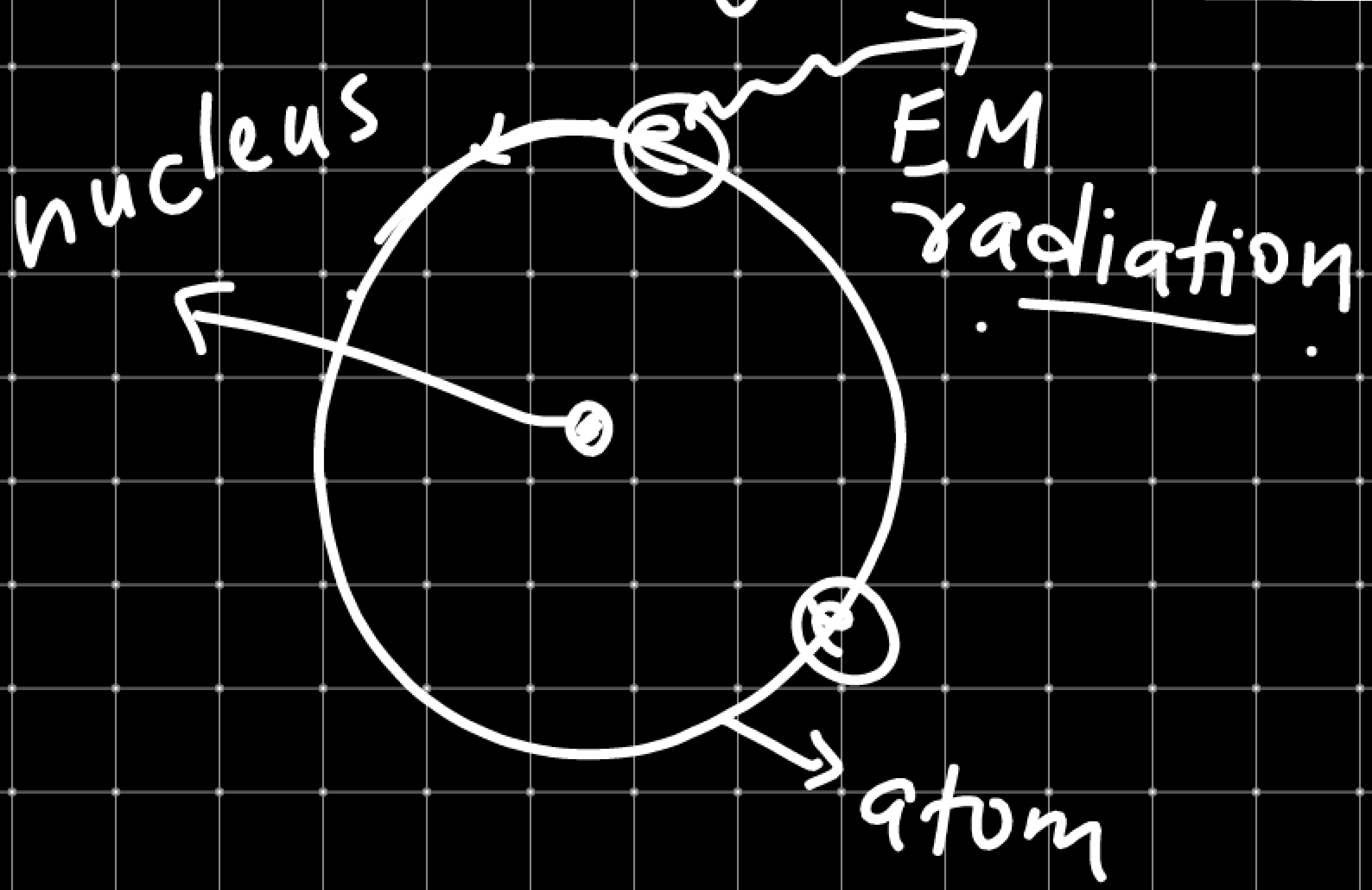
$$\frac{1}{\lambda} = RZ^2\left[\frac{1}{n_f^{\,2}} - \frac{1}{n_i^{\,2}}\right]$$

$1.1 \times 10^7 \ m^{-1}$ / $10^7 \ m^{-1}$

R = **1.09737×10**^{7} m^{-1}

Z → Atomic No. of the atom.

why the emission spectrum of H_2 is discrete? why not continuous



why is it expected to be continuous.?