

# VIDYAPEETH



BATCH CODE: 19-PJ301EA 2025

SUBJECT NAME: CHEMISTRY

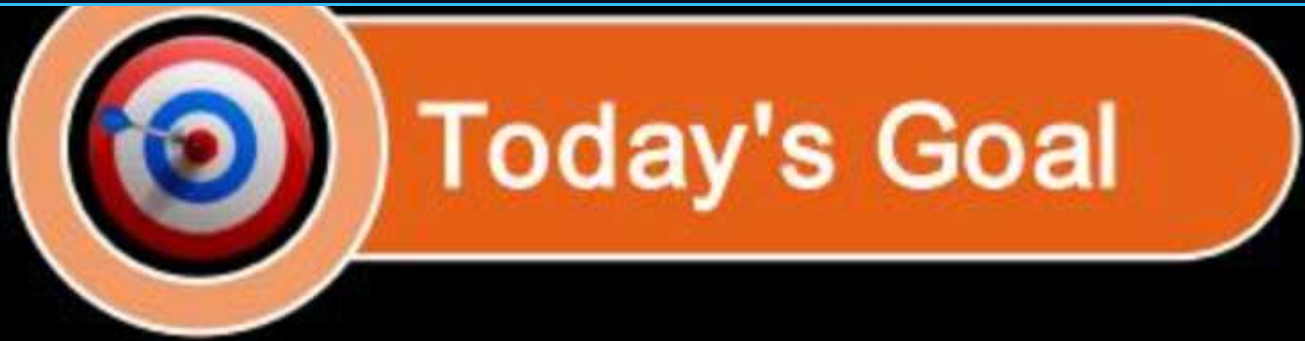
CHAPTER NAME:  
Atomic Structure

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Lecture No. 01

By – Swapnil Sir



\* discovery of Electron | Proton | neutrons

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Atomika → That can not be divide further. Atom

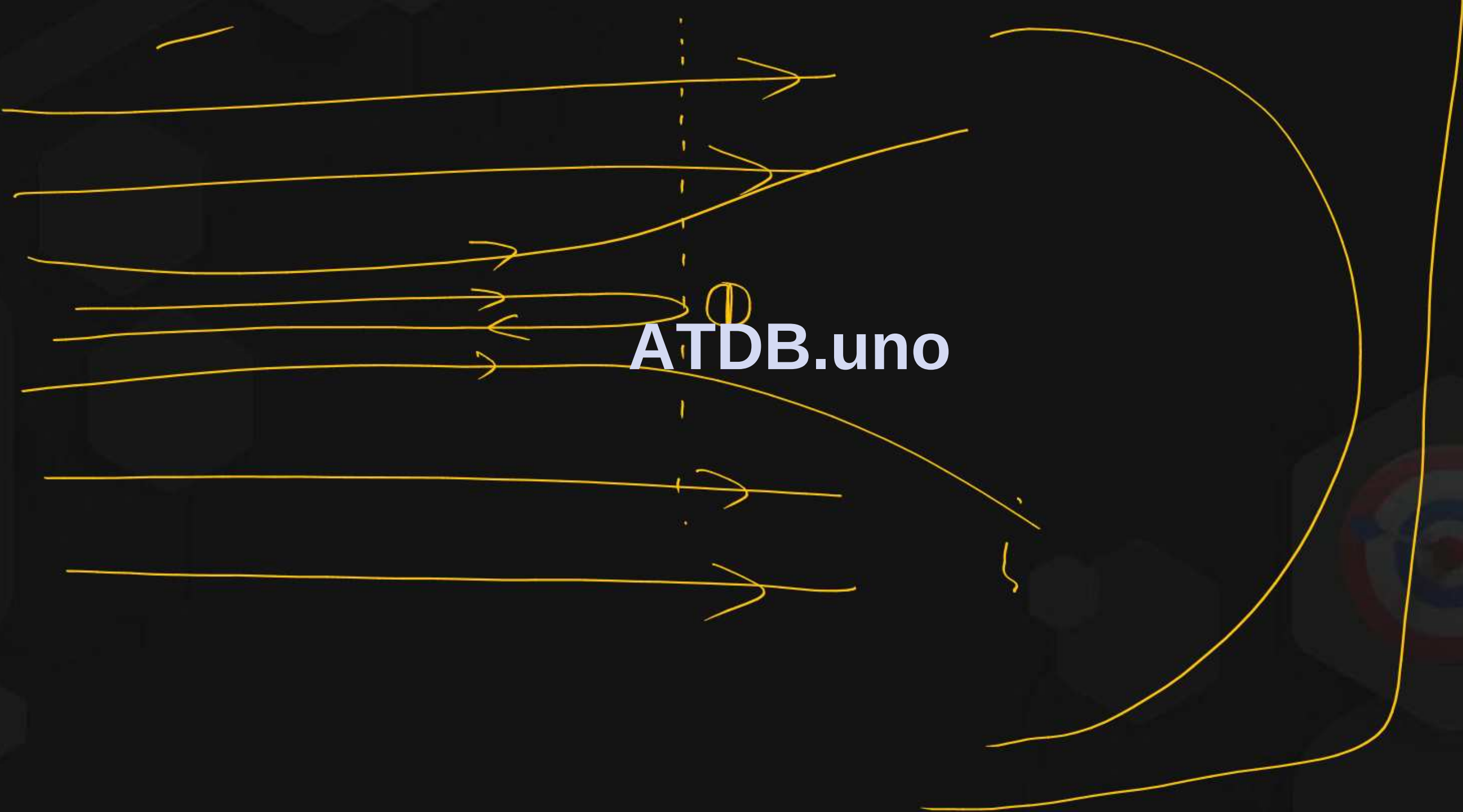
→ Cathode rays ⇒ electrons  $\left( \frac{-}{m} \right)$

→ Anode rays → ~~protons~~ |  $\left( \frac{e}{m} \right)$

$$10^4$$


Neutrons → Chadwick

Rutherford  $\alpha$ -particle scattering exp<sub>o</sub>  $\rightarrow$  Gold foil (p+n)



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# Maxwell → Electro-magnetic radiation      Drawback of  
Rutherford's model



# Bohr's Model

$$m v r = n \left( \frac{h}{2\pi} \right)$$

$n = 1, 2, 3,$

$h$  = Universal Plank's constant

$\frac{h}{2\pi}$

$\frac{2h}{2\pi}$

$\frac{3h}{2\pi}$

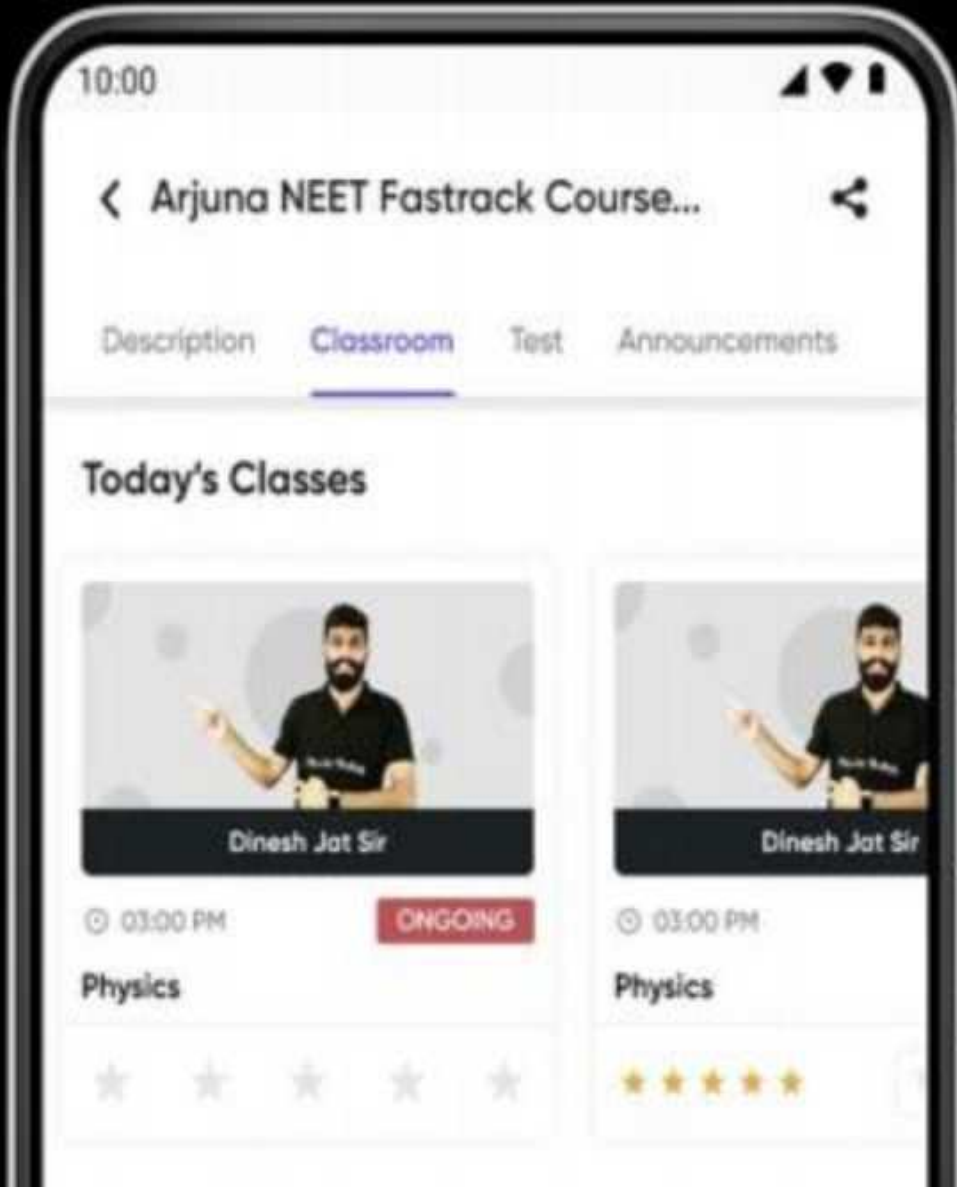
$\frac{4h}{2\pi}$



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Solve the DPP and check Solution



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VIDYAPEETH

WORK, POWER AND ENERGY

DPP-1 (JAP/046)

[Introduction, Definition of work, work done by constant force, Area under force-displacement curve]

1. A particle moves from position  $\vec{r}_1 = 3\hat{i} + 2\hat{j} - 6\hat{k}$  to position  $\vec{r}_2 = 14\hat{i} + 13\hat{j} + 9\hat{k}$  under the action of force  $-4\hat{i} + \hat{j} + 3\hat{k}$  N. The work done by this force will be

(A) 100 J  
(B) 50 J

(A)  $8 \times 10^{-2}$  joules  
(B)  $16 \times 10^{-2}$  joules  
(C)  $A = 10 \times 10^{-4}$  joules

Thank You!!!!

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