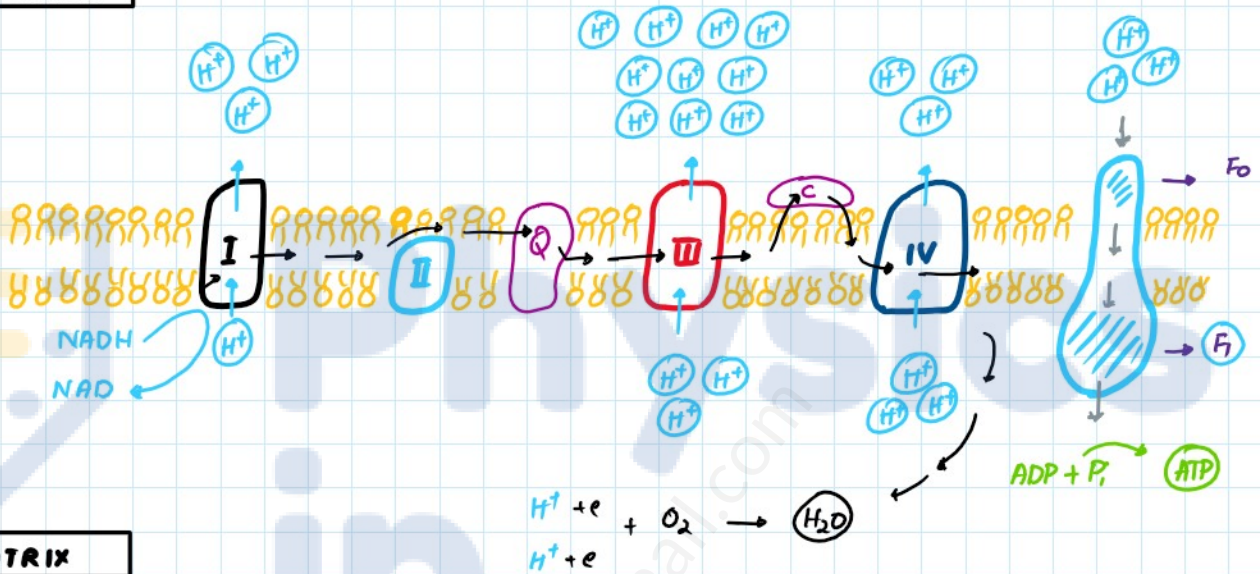


15.11 Chemiosmosis and Oxidative Phosphorylation

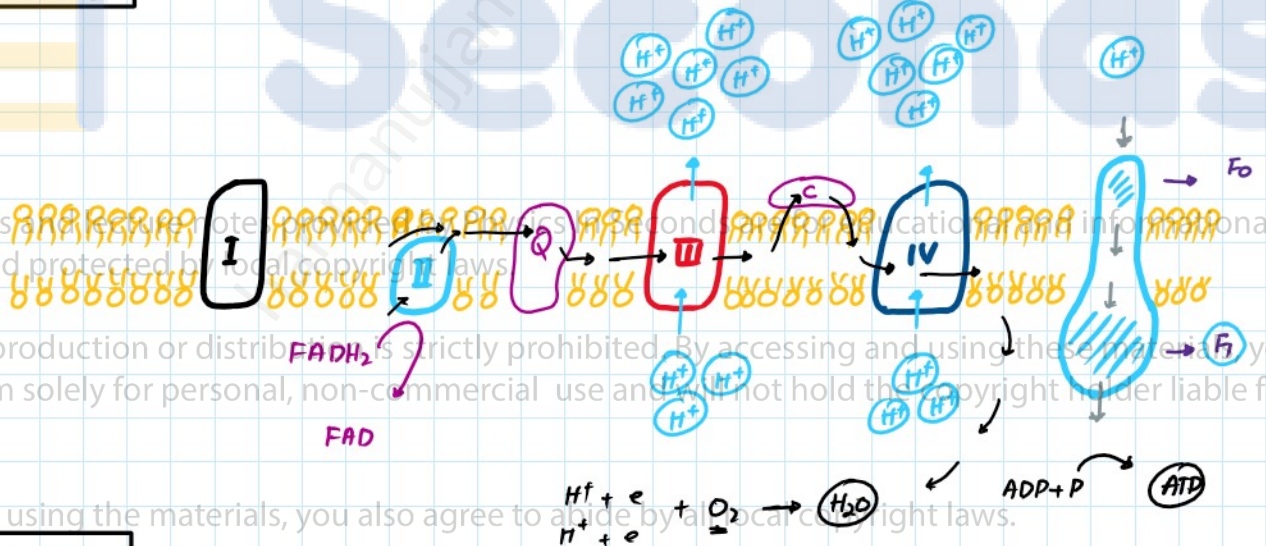
CHEMI — OSMOSIS

I.M. SPACE



MATRIX

I.M. SPACE



MATRIX

ENERGY BUDGET → For 1 Glucose.

GLYCOLYSIS		P. A. O.	KREB'S CYCLE	
ATP Formation	4	-	2	→ Substrate level (oc)
ATP Used	2	-	-	
NADH Formation	2 ✓	2 ✓	6 ✓	→ Oxidative phosphorylation

ATP Used	(2)	-	-	
NADH Formation	2 ✓	2 ✓	6 ✓	} Oxidative phosphorylation
FADH ₂ Formation	-	-	2	

Total NADH	=	10 × 3	=	30 ATP	→ 34 ATP → Oxidative phosphorylation.
Total FADH ₂	=	2 × 2	=	4 ATP	

Total ATP for 1 Glucose	→	40 ATP
Used ATP	→	4 ATP

Net ATP	=	Total - Used	
	=	40 - 4	= 36 ATP → Eukaryotic cell
			38 ATP → Prokaryotic cell.

The course videos and lecture notes provided by Physics In Seconds are for educational and informational purposes only and protected by local copyright laws.

Unauthorised reproduction or distribution is strictly prohibited. By accessing and using these materials, you agree to use them solely for personal, non-commercial use and will not hold the copyright holder liable for any damages.

By accessing and using the materials, you also agree to abide by all local copyright laws.