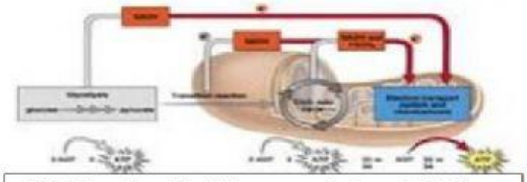


1 **NADH transferred its high- energy electrons to NADH dehydrogenase** (complex I).
NADH is _____ **to NAD⁺** while **NADH dehydrogenase is** _____.

2 **NADH dehydrogenase** (complex I) **return to its** _____ **state when it passes the electrons next to ubiquinone** (mobile carrier).
Ubiquinone (mobile carrier) **is now in** _____ **state**

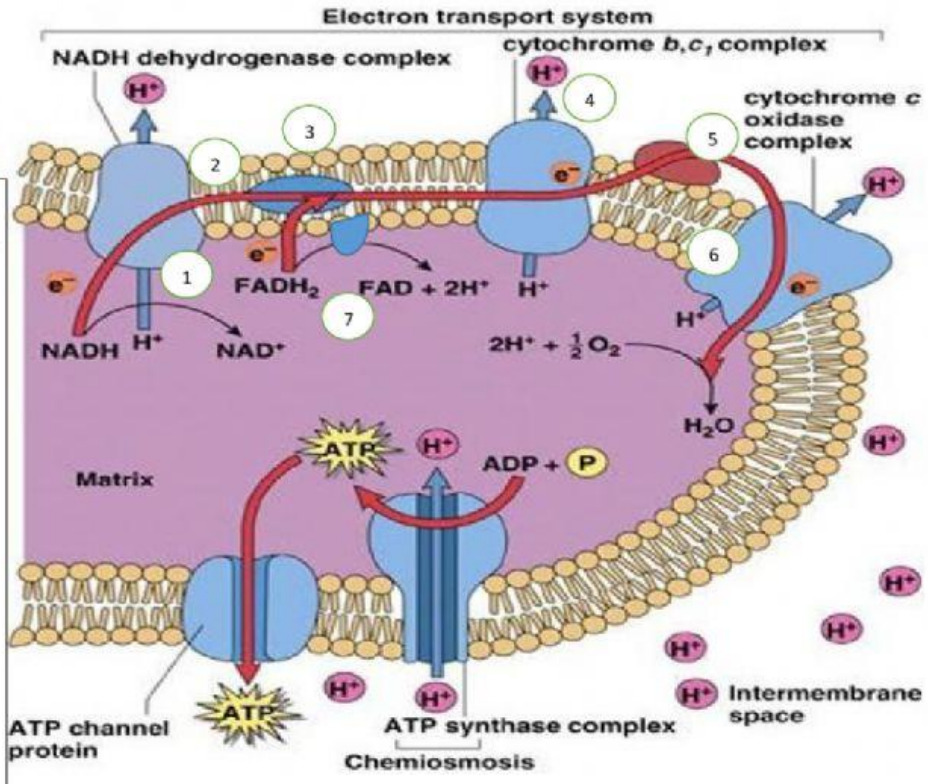
3 Ubiquinone (mobile carrier) then passes the electrons to **cytochrome c reductase** (complex III). **Ubiquinone** (mobile carrier) **is** _____ while **cytochrome c reductase** (complex III) **is** _____.

4 **Cytochrome c reductase** (complex III) **return to its** _____**state when it passes the electrons next to cytochrome c** (mobile carrier) . **Cytochrome c** (mobile carrier) **is now in** _____ **state**.

5 Cytochrome c (mobile carrier) then passes the electrons to **cytochrome c oxidase** (complex IV). **Cytochrome c** (mobile carrier) **is** _____ while **cytochrome c oxidase** (complex IV) _____.

6 **Cytochrome c oxidase** (complex IV) **return to its** _____ **state when it passes the electrons to the final electron acceptor** which is _____ (electronegative atom).
Each **oxygen atom picks up a pair of hydrogen ions** from the aqueous solution **to form water**.

$2H^+$ + $2e^-$ + $\frac{1}{2}O_2$ ⟶ H_2O
hydrogen ion electron oxygen water



Water (H_2O) is formed.
As the last electron acceptor.
$\frac{1}{2}$ O_2 is reduced when accepts 2 electron from cytochrome c oxidase (Complex IV) and $2H^+$ from mitochondrial matrix.

$FADH_2$ transferred its high- energy electrons to succinate dehydrogenase (complex II). **$FADH_2$ is oxidised to FAD** while **succinate dehydrogenase is reduced.**

From **succinate dehydrogenase** (complex II) onwards, the **electrons move through the same pathway as the electrons from NADH**. The final electron acceptor is oxygen, O_2.