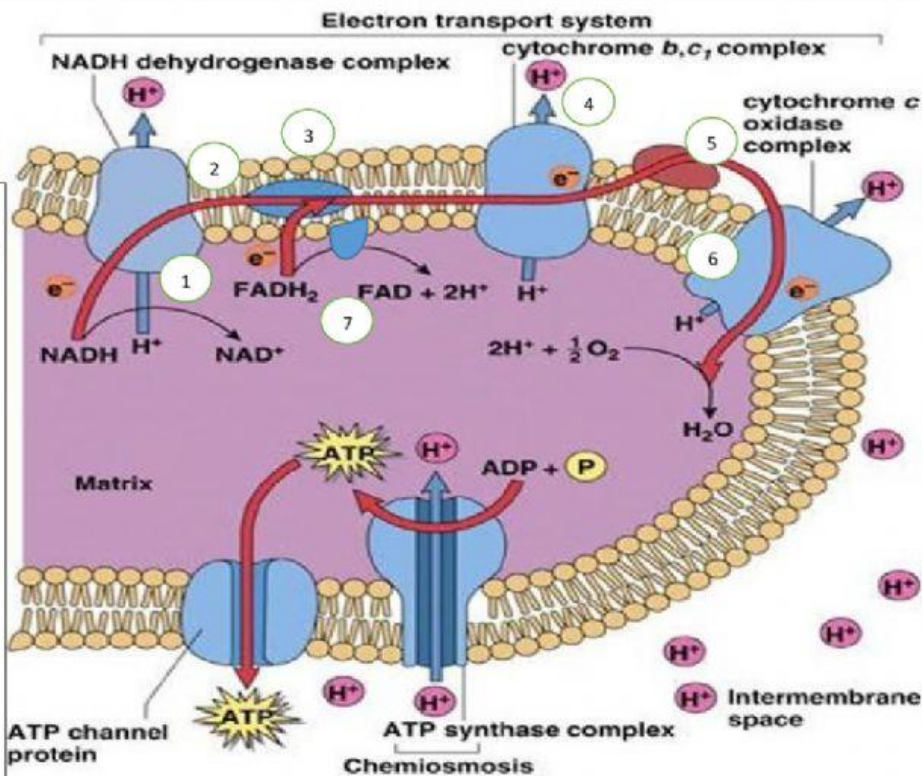
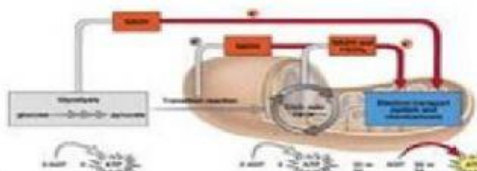




Water (H_2O) is formed.
As the last electron acceptor.
 $\frac{1}{2} \text{O}_2$ is reduced when accepts
2 electron from cytochrome c
oxidase (Complex IV) and 2H^+
from mitochondrial matrix.

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 .

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.

