

10.2: Exercises

1. What are the steps involved (in order) in the conversion of pyruvate to acetyl-CoA?
2. How many net ATP is yielded during converting one glucose molecule into CO_2 using Glycolysis, PDH and CAC?
3. What is the name of the enzyme that transports the pyruvate into the PDH?
4. Provide the OVERALL reaction (net equation) of Citric Acid Cycle.
5. Write the OVERALL reaction (net equation) catalyzed by pyruvate dehydrogenase complex.
6. What is the step-wise chemical mechanism of PDH?
7. Pyruvate dehydrogenase complex and citric acid cycle together can oxidize pyruvate in CO_2 . During this process (from pyruvate to CO_2),
 - a) Which enzymes are used for regulation?
 - b) Which molecules are used for the activation during the regulation?
 - c) Which molecules are used for the inhibition during the regulation?

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