

I. Aerobic Respiration (Oxidative)

A. When oxygen is present, pyruvate created in glycolysis enters the

B. Aerobic Respiration occurs in **Two Stages:**

- a. **(Citric Acid Cycle)**
- b. **(ETC)**

C. More than anaerobic respiration; can yield () ATP's

II. KREB'S CYCLE ()

A. This takes place within the

B. Two molecules from glycolysis are converted into (NADH and FADH₂), and several (waste).

C. The Kreb's Cycle passes to the inner membrane of the mitochondria to continue aerobic respiration process.

III. Electron Transport Chain

A. This is the of aerobic respiration (also called the which takes place within the inner mitochondrial membrane.

B. in the carrier molecules are (along a chain) to produce molecules of ATP.

C. by combining molecules with "empty" electrons at the end of the chain.

IV. Cellular Respiration Summary: $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O + ATP$

A. In the anaerobic process of **glycolysis**, organic compounds are converted into producing a small amount of and

B. In **aerobic respiration**, pyruvic acid is broken down using to produce and , which produces a large amount of

