The common **mechanism** of **aerobic respiration** is also called common pathway because its first step, called glycolysis, is common to both **aerobic** and **anaerobic** modes of **respiration**. The common **aerobic respiration** consists of three steps—glycolysis, Krebs cycle and terminal oxidation.

GLYCOLYSIS; The process is called Glycolysis or EMP Pathway (Embden-Meyerhof-Parnas Pathway). This process does not require O2 although this can take place in the presence of oxygen. After this stage, the fate of pyruvic acid is different depending upon the presence or absence of oxygen. It is also called EMP pathway because it was discovered by three German scientists Embden, Meyerhof and Parnas. Glycolysis is the process of breakdown of glucose or similar hexose sugar to molecules of pyruvic acid through a series of enzyme mediated reactions releasing some energy (as ATP) and reducing power (as NADH2). It occurs in the cytoplasm. It takes place in the sub steps.

KREBS CYCLE:The cycle was discovered by Hans Krebs (1937, 1940, Nobel Prize 1953). It occurs inside mito­chondria. The cycle is also named as citric acid cycle or tricarboxylic acid (TCA) cycle after the initial product. Krebs cycle is stepwise oxidative and cyclic degradation of activated acetate derived from pyruvate.

TERMINAL OXIDATION:It is the name of oxidation found in aerobic respiration that occurs towards the end of catabolic process and involves the passage of both electrons and protons of reduced coenzymes to oxygen.Terminal oxidation consists of two processes-electron transport and oxidative phosphorylation.