

Q) Write 4 points of difference between aerobic and anaerobic respiration.

### Aerobic respiration

- (i) It is the process of breakdown of food in the presence of  $O_2$ .
- (ii) It takes longer time to release energy.
- (iii) It occurs in the cytoplasm and mitochondria.
- (iv) End products are  $CO_2$  and water.

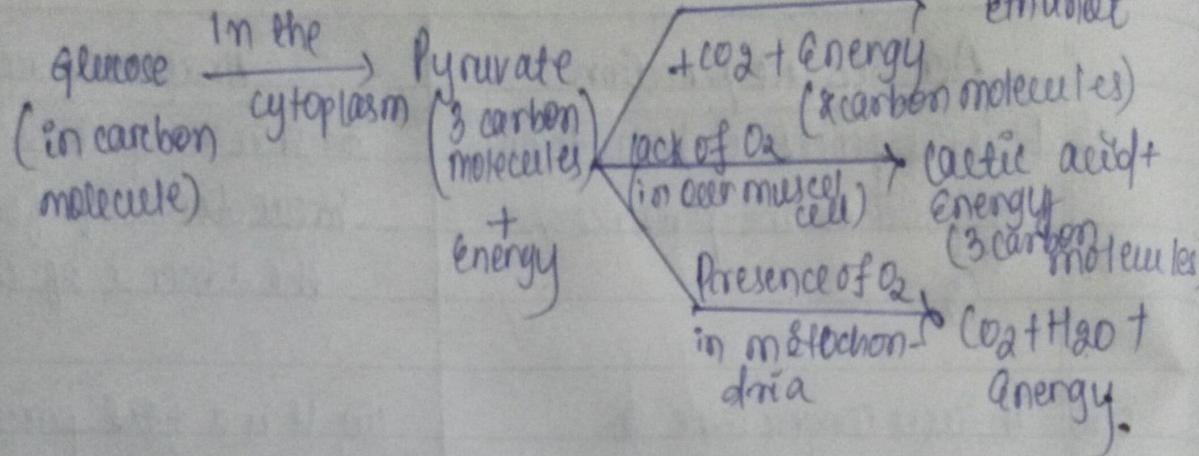
### Anaerobic respiration

- (i) It is the process of breakdown of food in the absence of  $O_2$ .
- (ii) It is a fast process in comparison to aerobic respiration.
- (iii) It occurs only in the cytoplasm.
- (iv) End product is  $CO_2$ , ethanol in case of yeast and lactic acid in case of animals.

Pg-105, box question

Q) What are the different ways in which glucose is oxidised to provide energy in various organisms?

Glucose is first broken down in the cytoplasm into 3 carbon molecules known as pyruvate. Pyruvate is further broken down:



### Exercise Qno. 8

What are the difference between aerobic and anaerobic respiration? Name some organisms that use ~~aerobic~~ anaerobic mode of respiration.

#### Aerobic Respiration

- (i) It occurs in the presence of O<sub>2</sub>.
  - (ii) It occurs in cytoplasm and mitochondria.
  - (iii) It releases CO<sub>2</sub> and H<sub>2</sub>O.
  - (iv) Exchange of gases occur.
- Anaerobic respiration occurs in some organisms such as yeast and bacteria.

#### Anaerobic Respiration

- (i) It occurs in the absence of O<sub>2</sub>.
- (ii) It occurs only in the cytoplasm.
- (iii) It releases alcohol and CO<sub>2</sub>.
- (iv) Exchange of gases don't occur.