

Fermentation is a metabolic process that is catalysed by enzymes, wherein organisms convert starch or sugar to alcohol or an acid anaerobically releasing energy. The science of fermentation is called “zymology”. It is an anaerobic biochemical process, wherein the first step is the same as cellular respiration, which is the formation of pyruvic acid by glycolysis where net 2 ATP molecules are synthesised. In the next step, pyruvate is reduced to lactic acid, ethanol or other products. Here  $\text{NAD}^+$  is formed which is re-utilized back in the glycolysis process.

**1. *Monascus purpureus* is utilized in the production of**

- (a) citric acid
- (b) ethanol
- (c) statins
- (d) streptokinase

**Answer: (c)**

**2. The type of fermentation observed in yeasts is**

- (a) acrylic fermentation
- (b) lactic acid fermentation
- (c) pyruvic fermentation
- (d) alcoholic fermentation

**Answer: (d)**

**3. In lactic acid fermentation, the final electron acceptor is:**

- (a) Lactic acid
- (b) Pyruvate
- (c) Oxygen
- (d) NAD

**Answer: (b)**

**4. Which of these is not a product of fermentation?**

- (a) Lactate
- (b) Oxygen
- (c) Carbon dioxide
- (d) Ethanol

**Answer: (b)**

5. Which of the following is not a vegetable or fruit-based fermented product?

- (a) Wine
- (b) Sauerkraut
- (c) Beer
- (d) Vinegar

**Answer: (d)**

6. One of the most commonly used fermented cereal amongst these is

- (a) Wheat
- (b) Bread
- (c) Rice
- (d) Yoghurt

**Answer: (b)**

7. Glucose molecule during the process of glycolysis is broken down into

- (a) Four pyruvic acid
- (b) Three pyruvic acid
- (c) Two pyruvic acid
- (d) One pyruvic acid

**Answer: (c)**

8. Fermentation occurs in the

- (a) presence of oxygen
- (b) absence of oxygen
- (c) presence of nitrogen
- (d) presence of carbon

**Answer: (b)**

9. The least yield of ATP is observed in

- (a) aerobic respiration
- (b) anaerobic respiration
- (c) fermentation
- (d) same in (a), (b), and (c)

**Answer: (c)**

10. Anaerobic respiration by yeast produces

- (a)  $\text{CO}_2$
- (b) Wine and Beer
- (c) Alcohol
- (d) All of the above

**Answer: (d)**

