

## Biology - FSC Part 1 Biology English Medium Chapter 11 Preparation

Q1. Define redox process. Give example

**Ans 1:** Oxidation reduction reaction collectively called redox reaction or redox process, Removal of hydrogen is called oxidation and addition of hydrogen is called reduction.

Q2. Define glycolysis. Where it takes place?

**Ans 1:** Glycolysis means breakdown of sugar. This is the first step of respiration and it takes place in the cytoplasm

Q3. What are cytochromes? Give its role.

**Ans 1:** Synthesis of ATP in the presence of oxygen is called oxidative phosphorylation.

Q4. What is fermentation? Name its two types.

**Ans 1:** Fermentation is a process in which pyruvic acid is oxidized in the absence of oxygen. Its types are alcoholic fermentation and lactic fermentation.

Q5. Differentiate between respiration and photosynthesis.

**Ans 1:** Respiration : It is an energy releasing process.  
Its raw material is glucose and oxygen.  
It occurs day and night

**Ans 2:** It is an energy capturing process.  
Its raw material is CO<sub>2</sub> and water.  
It occurs only day time.

Q6. Write down the name of main phases of glycolysis.

**Ans 1:** Two main phases of glycolysis are:

1. Preparatory phase
2. Oxidation phase

Q7. Differentiate between action spectrum and absorption spectrum,

**Ans 1:** Action spectrum: a graph plotting absorption of light of different wavelengths by a pigment is called absorption spectrum

of pigment.

**Ans 2:** Absorption spectrum: Plot showing relative effectiveness of different wavelength of light in deriving photosynthesis is called action spectrum of photosynthesis.

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Q8. What are photosystems?

**Ans 1:** Photosynthetic pigments are organized into clusters, called photosystems, for efficient absorption and utilization of solar energy in the thylakoid membranes.

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Q9. Differentiate between internal respiration and external respiration.

**Ans 1:** External respiration: The exchange of respiratory gases between the organism and its environment is called external respiration.

**Ans 2:** Internal respiration: The oxidation process in which inhaled air is used to oxidize organic molecules to obtain energy. This reaction takes place inside the cell so it is also known as cellular respiration.

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Q10. What is "Z" scheme? Why is it called so?

**Ans 1:** Flow of electron in noncyclic electron chain is called Z-scheme. The path of electrons through the two photosystems during non-cyclic photophosphorylation is known as Z-scheme from its shape.

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