

CLASS XI SUBJECT : BIOLOGY
ASSIGNMENT NO. 6

RESPIRATION IN PLANTS

- Q1. Define respiration.
- Q2. Why is stepwise release of energy useful to organisms?
- Q3. What are respiratory substrates?
- Q4. Give balanced equation of respiration.
- Q5. Which are the organs for gaseous exchange in plants?
- Q6. Why can plants get along without respiratory organs? Give reasons.
- Q7. Give differences between aerobic & anaerobic respiration.
- Q8. Give schematic representation of mechanism of aerobic respiration.
- Q9 (a) Give schematic representation of glycolysis. (b) What are its end products?
(c) How many ATP & NADH produced by it.
- Q10. Explain fermentation in yeast.
- Q11. What is oxidative decarboxylation? What happens to pyruvate immediately after the reaction? Name the enzyme involved in the reaction.
- Q12(a) Give schematic representation of Krebs's Cycle.
(b) What is the net gain of NADH + A⁺ in the cycle?
(c) What is the no. of CO₂ produced in it?
(d) Give significance of TCA cycle.
- Q13. Give schematic representation of electron transport chain in mitochondria & give role of complex I, II, III, IV & V.
- Q14. What is oxidative phosphorylation? Describe the structure & role of F₀-F₁ particles in this process.
- Q15. In tabular form calculate the total No. of ATP produced from one molecule of glucose during aerobic respiration.
- Q16. Justify the statement. "Respiratory pathway – An amphibolic pathway."
- Q17. What is respiratory quotient? Give R.Q. values for carbohydrate, fats proteins & organic acids.