



HEAD OFFICE

208, CD, LOCAL SHOPPING CENTER
AGGARWAL SHOPPING PLAZA,

BRANCH -1

AYODHYA CHOWK SEC -3
ROHINI

BRANCH -2

DC CHOWK SEC- 9, ROHINI

9TH & 10TH MATHS / SCIENCE
11TH & 12TH – PHYSICS / CHEMISTRY / MATHS / BIOLOGY
EXCLUSIVE BATCH FOR NEET / JEE ASPIRANTS
Ph no. 9696 500 500 / 9696 400 400

Ch- 14 Respiration in plants

1. Define cellular respiration.

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2. Write the equation for respiration of glucose.

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3. Where is glucose derived from, in plants?

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4. Name the enzyme that catalyses the phosphorylation of glucose.

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5. How many molecules of NADH are formed in glycolysis from one molecule of glucose?

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6. What is the net gain of ATP molecules formed directly from glycolysis?

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7. What percentage of energy from a glucose molecule is liberated during fermentation?

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8. The energy yield in terms of ATP is higher in aerobic respiration than in anaerobic on respiration. Why?

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9. How many molecules of NADH are formed in one turn of Krebs' cycle?

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10. Do you know any step in the TCA cycle where substrate level phosphorylation takes places? Mention it.
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11. F_0-F_1 particles participate in the synthesis of.....
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12. What is oxidative phosphorylation?
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2 marks

13. What are respiratory substrates? Name the most common respiratory substrate.
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14. Differentiate between respiration and combustion.
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15. Name the site(s) of pyruvate synthesis. Also, write the chemical reaction wherein pyruvic acid dehydrogenase acts as a catalyst.
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16. Distinguish between glycolysis and fermentation.
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17. Distinguish between glycolysis and citric acid cycle.
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18. Distinguish between aerobic respiration and anaerobic respiration.
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19. What is complex IV in ETS of mitochondria? Mention its components?
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20. What are the assumptions made for the calculation of net gain of ATP?
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21. Which of the following will release more energy on oxidation ?

Arrange them in ascending order:

- (a) 1 g of fat
 - (b) 1 g of protein
 - (c) 1 g of glucose
 - (d) 0.5 g of protein + 0.5 g of glucose
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3 marks

22. What is the significance of step-wise release of energy in respiration?
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23. What are the main steps in aerobic respiration? Where does it take place?
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24. Differentiate between aerobic respiration and fermentation.
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25. A process is occurring throughout the day in 'X' organism. Cells are participating in this process.

During this process, ATP, CO₂ and water are formed. It is not a light-dependent process.

- (a) Name the process.
 - (b) Is it a catabolic or an anabolic process?
 - (c) What could be the raw material of this process?
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