

India's Number 1 Education App

BIOLOGY

BOOKS - BAL BHARTI

RESPIRATION AND ENERGY TRANSFER

Use Your Brain Power

1. Why some reactions of glycolysis are

reversible and some irreversible.

2. Why is glycolysis considered as biochemical

proof of evolution?



3. Why do athletes like sprinters have a higher

proportion of white muscle fibre?

4. Do plant breathe like animals? If yes, how

and why?

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Exercise Choose Correct Option

1. The reactions of the TCA cycle occur in......

A. ribosomes

B. grana

C. mitochondria

D. endoplasmic reticulum

Answer:

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2. In eucaryotes the complete oxidation of a molecule of glucose results in the net gain of.

A. 2 molecules of ATP

B. 36 molecules of ATP

C. 4 molecules of ATP

D. 38 molecules of ATP

Answer:

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3. The intermediate between glycolysis and TCA cycle is

A. 2 molecule of ATP

B. 36 molecule of ATP

C. 4 molecule of ATP

D. 38 molecule of ATP

Answer:

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4. Do you know any step in the TCA cycle where there is substrate level phosphorylation. Which one?

A. lpha- ketoglutarate ightarrow succinyl CoA.

B. Succiny CoA \rightarrow succinate

C. Succinate \rightarrow fumarate

D. Fumarate \rightarrow malate

Answer:

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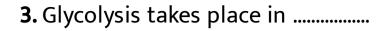
Exercise Fill In The Blanks With Suitable Words

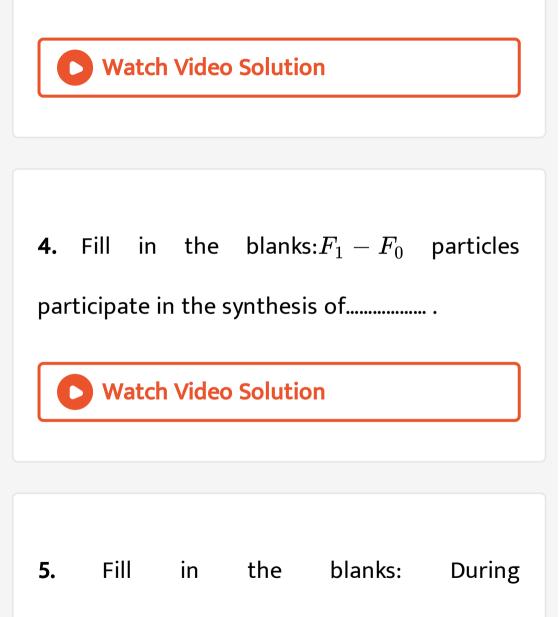
1. Fill in the blanks: Acetyl CoA is formed

from.....and co-enzyme A.

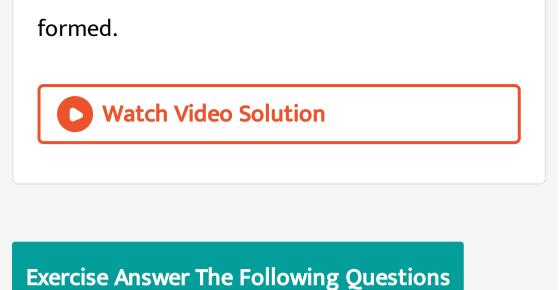
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2. Fill in the blanks:In the prokaryotes...... molecules of ATP are formed per molecule of glucose oxidised.





glycolysis.....molecule of NADH are



1. When and where does anaerobic respiration

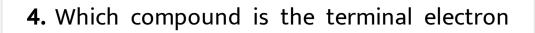
occur in man and yeast?

2. Why is less energy produced during anaerobic respiration than in aerobic respiration?

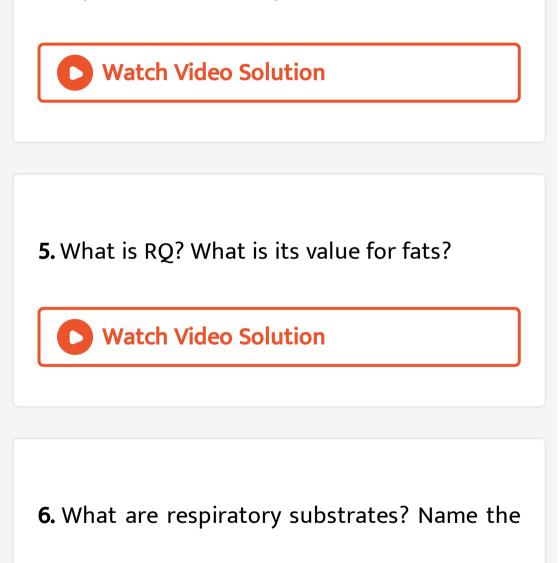


3. Where is the respiratory electron transport

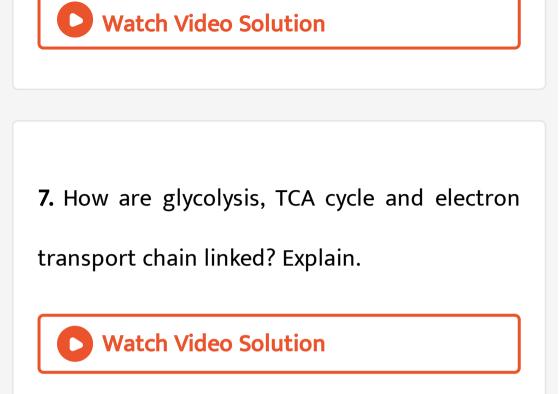
system located in a cell?



acceptor in aerobic respiration?



most common respiratory substrate.



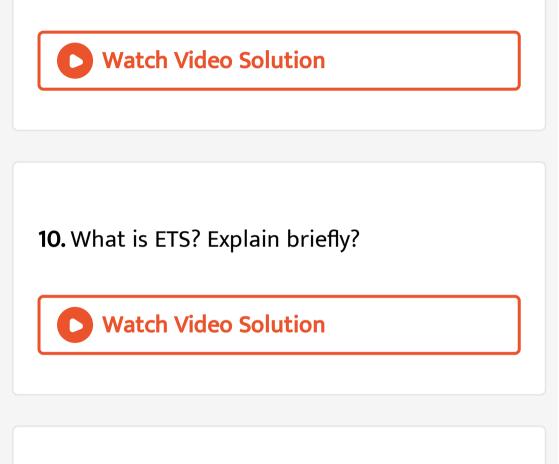
8. How would you demonstrate that yeast can

respire both aerobically and anaerobically?



9. What is the advantage of step wise energy

release in respiration?



11. Why is Kreb's cycle referred to as an amphibolic pathway?



12. Which of the following steps of aerobic respiration would be omitted when fatty acids are used as respiratory substrate?

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13. Which of the following steps of aerobic respiration would be omitted when fatty acids are used as respiratory substrate?

14. Which of the following steps of aerobic respiration would be omitted when fatty acids are used as respiratory substrate?

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15. Which of the following steps of aerobic respiration would be omitted when fatty acids

are used as respiratory substrate?



1. Distinguish between the following.

Photosynthesis and Respiration.

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2. Distinguish between Aerobic and anaerobic

respiration :

Exercise Differentiate Between

1. Differentiate between

Respiration and combustion.

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2. Glycolysis and Krebs cycle

3. Differentiate between

Aerobic respiration and fermentation.

