

Time : 1 hour 15 Minute

STD 11 Science Biology
chapter Based Test

Total Marks : 40

SECTION A

* Choose The Right Answer From The Given Options.[1 Marks Each] [5]

- In glycolysis, during oxidation electrons are removed by.
(A) ATP. (B) Glyceraldehyde-3-phosphate.
(C) NAD⁺ (D) Molecular oxygen.
- Respiratory quotient of carbohydrates is:
(A) 0.9 (B) 1.2 (C) 1 (D) 0
- The complete oxidation of pyruvate take place in:
(A) Cell cytoplasm. (B) Inner mitochondrial membrane.
(C) Mitochondrial matrix. (D) Nucleus.
- Oxidative phosphorylation involves simultaneous oxidation and phosphorylation to finally form.
(A) Pyruvate. (B) NADP. (C) APN. (D) ATP.
- In which one of the following do the two names refer to one and the same thing?
(A) Tricarboxylic acid cycle and urea cycle.
(B) Krebs cycle and Calvin cycle.
(C) Tricarboxylic acid cycle and citric acid cycle.
(D) Citric acid cycle and Calvin cycle.

* Answer The Following Questions In One Sentence.[1 Marks Each] [6]

- Name the two enzymes involved in the fermentation process in yeast.
- Mention the significance of F_0-F_1 combination in mitochondria.
- Name the haem protein present in the ETC.
- Name the first step in cellular respiration.
- Glucose _____ A _____ 3-phosphoglyceric acid _____ B _____ pyruvic acid _____ C + CO₂.
- Which is the first step in cellular respiration?

SECTION B

* Given Section consists of questions of 2 marks each. [10]

- Write the equation for the phase of respiration inside the mitochondria.
- The maximum concentration of alcohol produced by natural fermentation is 13%. But most of the alcoholic preparations for human consumption contain more than this percentage. How this higher percentage is achieved?

- Do you know any step in the TCA cycle where there is substrate level phosphorylation. Which one?
- What is glycolysis? In which part of the cell, glycolysis takes place? Name the enzyme that converts sucrose into glucose and fructose.
- Name the site (s) of pyruvate synthesis. Also, write the chemical reaction, wherein pyruvic acid dehydrogenase acts as a catalyst.

SECTION C

* Given Section consists of questions of 3 marks each.

[9]

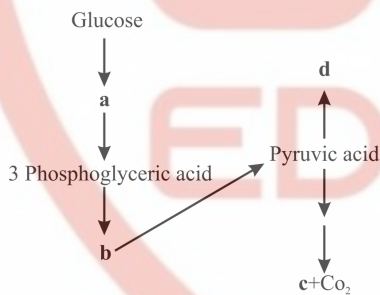
- ATP produced during glycolysis is a result of substrate level phosphorylation. Explain.
- When does anaerobic respiration occur in man and yeast?
- Distinguish between the following:
Aerobic respiration and Anaerobic respiration

SECTION E

* Given Section consists of questions of 5 marks each.

[10]

- In the following flow chart, replace the symbols a,b,c and d with appropriate terms. Briefly explain the process and give any two application of it.



- Oxygen is critical for aerobic respiration. Explain its role with respect to ETS.

॥ ज्ञानं एव श्रमस्य पुंजः ॥