

Class : XIth
Date :

Subject : BIOLOGY
DPP No. : 6

Topic :- Respiration in Plants

- Which of the following is a 4-carbon compound?
a) Oxaloacetic acid
b) Phosphoglyceric acid
c) Ribulose bisphosphate
d) Phosphoenol pyruvate
- An example of non-competitive inhibition is
a) The inhibition of succinic Dehydrogenase by Malonate
b) Cyanide action on cytochrome oxidase
c) Sulpha drug on folic acid synthesizing bacteria
d) The inhibition of Hexokinase by glucose 6-phosphate
- What is the net ATP molecules gain, when 4 molecules of glucose undergo anaerobic respiration in plant?
a) 8 ATP
b) 20 ATP
c) 144 ATP
d) 16 ATP
- Chemiosmosis hypothesis given by Peter Mitchell proposes the mechanism of
a) Synthesis of NADH
b) Synthesis of ATP
c) Synthesis of FADH₂
d) Synthesis of NADPH
- Glycolysis
a) Takes place in the mitochondria
b) Produces no ATP
c) Has no connection with electron transport chain
d) Reduce two molecules of NAD⁺ for every glucose molecule processed
- Citric acid cycle is also known as
a) Tricarboxylic acid cycle
b) Oxidative decarboxylation
c) Fermentation cycle
d) Both (a) and (b)
- Instantaneous source of energy is
a) Protein
b) Lipid
c) Fats
d) Glucose
- Before entering into the respiratory pathway fats breakdown into
a) Fatty acid and glycerol
b) Fatty acid and ascorbic acid
c) Fatty acid and amino acid
d) Fatty acid and ascorbic acid

9. In which of the following reactions of glycolysis, a molecule of water is removed from the substrate?
- a) Fructose-6-phosphate \rightarrow Fructose-1, 6-bisphosphate
 b) 3-phosphate-glyceraldehyde \rightarrow 1, 3-bisphosphoglyceric acid
 c) PEP \rightarrow Pyruvic acid
 d) 2-phosphoglycerate \rightarrow PEP
10. The reactions of Pentose Phosphate Pathway (PPP) take place in
- a) Mitochondrion
 b) Cytoplasm
 c) Chloroplast, peroxisome and mitochondrion
 d) Chloroplast, glyoxysome and mitochondrion
11. In citric acid cycle first step is
- a) Acetyl Co-A combines with oxalo acetic acid
 b) Acetyl Co-A combines with citric acid
 c) Citric acid combines with oxaloacetic acid
 d) Citric acid combines with malic acid
12. Pyruvate \rightarrow C₂H₃OH + CO₂
 The above reaction needs two enzymes named as
- a) Pyruvate decarboxylase and alcohol dehydrogenase
 b) Pyruvate decarboxylase and enolase
 c) Pyruvate decarboxylase and pyruvate kinase
 d) Pyruvate carboxylase and aldolase
13. FAD is electron acceptor during oxidation of which of the following?
- a) α -ketoglutarate \rightarrow Succinyl Co-A
 b) Succinic acid \rightarrow Fumaric acid
 c) Succinyl Co-A \rightarrow Succinic acid
 d) Fumaric acid \rightarrow Malic acid
14. Which of the following substrate can enter into the respiration?
- a) Glucose
 b) Amino acid
 c) Fatty acid
 d) All of these
15. RQ value of 4 may be expected for the complete oxidation of which one of the following?
- a) Glucose
 b) Malic acid
 c) Oxalic
 d) Tartaric acid
16. When act as a respiratory substrate, which of the following would be broken down to acetyl Co-A?
- a) Fatty acid
 b) Protein
 c) Carbohydrate
 d) All of these
17. Anaerobic respiration generally occurs in
- a) Lower organism, *e.g.*, bacteria and fungi
 b) Higher organism, *e.g.*, animal
 c) Both (a) and (b)
 d) None of the above
18. In which of the following, reduction of NAD does not occur?
- a) Isocitric acid \rightarrow α -ketoglutaric acid
 b) Malic acid \rightarrow Oxaloacetic acid
 c) Pyruvic acid \rightarrow Acetyl coenzyme
 d) Succinic acid \rightarrow Fumaric acid

19. How many $\text{NADH} + \text{H}^+$ molecule is released in Kreb's cycle?
a) 3 b) 6 c) 12 d) 14
20. Cell respiration is carried out by
a) Ribosome b) Mitochondria c) Chloroplast d) Golgi bodies

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