DPP
DAILY PRACTICE PROBLEMS

Class : XIth **Subject : BIOLOGY**
Date : **DPP No. : 10**

Topic :- Respiration in Plants

1. In the electron transport system present in the inner mitochondrial membrane, complexes I and IV are respectively
   a) NADH Dehydrogenase and $FADH_2$
   b) $NADH_2$ and NADH Dehydrogenase
   c) NADH Dehydrogenase and cytochrome-c oxidase complex
   d) NADH dehydrogenase and ATP synthase

2. In respiration incomplete oxidation of glucose is done under
   a) Aerobic respiration b) Anaerobic respiration
   c) Both (a) and (b) d) None of these

3. The cellular respiration first takes place in the
   a) Cytoplasm b) Golgi bodies c) ER d) Lysosomes

4. Which of the following scientist has given the scheme of glycolysis?
   a) Gustav Embden *et. al* b) Kreb *et. al* c) Fritz Lipmann *et. al* d) None of these

5. Which metabolic pathway is a common pathway to both anaerobic and aerobic metabolism?
   a) Glycolysis b) EMP pathway c) Both (a) and (b) d) None of the above

6. In mitochondria, enzyme cytochrome oxidase is present in
   a) Outer membrane b) Perimitochondrial space
   c) Inner membrane d) Matrix

7. TCA cycle enzymes are present in
   a) Cytoplasm b) Inter membrane space of mitochondria
   c) Mitochondrial matrix d) Inner membrane of mitochondria

8. Among the following, identify the substrate required for the only oxidative reaction that occurs in the process of glycolysis.
   a) 3-phosphoglyceric acid
   b) Glyceraldehyde 3-phosphate
   c) Fructose-6-phosphate
   d) Glucose-6-phosphate

9. Aerobic respiration is
   a) The process in which complete oxidation of organic substances in the absence of oxygen
   b) The process in which complete oxidation of organic substances in the presence of oxygen
   c) The process in which incomplete oxidation of organic substances in the absence of oxygen
   d) The process in which incomplete oxidation of organic substances in the presence of oxygen

10. What will happen, when glucose is administered orally?
   a) Excretion b) Digestion c) Circulation d) Respiration

11. How many ATP molecules could maximally be generated from one molecule of glucose, if the complete oxidation of one mole of glucose to carbon dioxide and water yields 686 kcal and the useful chemical energy available in the high energy phosphate bond of one mole of ATP is 12 kcal?
   a) Two b) Thirty c) Fifty seven d) One

12. In photosynthesis, $NADPH_2$ is formed but in respiration it forms during
   a) HMP b) ETS c) Krebs' cycle d) None of these

13. Plants does not need specialised respiratory organ because
   a) Each plant part takes care of its own gas exchange needs b) Plants do not need great demands for gas exchange
   c) Both (a) and (b) d) None of the above

14. Lactic acid is formed in
   a) Fermentation b) Glycolysis c) HMP pathways d) None of these

15. In which part of mitochondria does ATP synthesis occur?
   a) F_1 b) F_0
   c) Cristae d) Inner membrane of mitochondria

16. In oxidative decarboxylation, enzyme used to
   a) Pyruvate decarboxylase b) Pyruvate dehydrogenase
   c) Pyruvate hydrogeneticase d) Pyruvate dehydrogeneticase

17. Select the wrong statement.
   a) When tripalmitin is used as a substrate in respiration, the RQ is 0.7
   b) The intermediate compound which links glycolysis with Krebs' cycle is malic acid
   c) One glucose molecule yields a net gain of 36 ATP molecules during aerobic fermentation
   d) One glucose molecule yields a net gain of 2 ATP molecules during fermentation

18. Enzymes found attached to inner membrane of mitochondria instead of matrix is/are
   a) Succinic Dehydrogenase b) Cytochrome oxidase
   c) Both (a) and (b) d) Malic Dehydrogenase

19. Four respiratory enzymes are given below. Arrange them in increasing order of the carbon number of the substrates on which they act.
    I. Enolase
    II. Aconitase
    III. Fumarase
    IV. Alcohol Dehydrogenase
    a) II, IV, III, I b) IV, I, II, III c) I, IV, III, II d) IV, I, III, II

20. Link enzyme in cellular respiration is
    a) Citrate synthetase b) Pyruvate Dehydrogenase
    c) Isocitrate Dehydrogenase d) Succinyl thiokinase