DPP

DAILY PRACTICE PROBLEMS

Class : XIth **Subject : BIOLOGY**

Date : **DPP No. : 2**

Topic :- Respiration in Plants

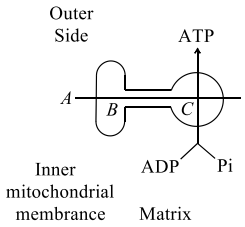
1. Which one of the following is the terminal electron acceptor?
   a) Molecular CO_2 b) Molecular O_2 c) Molecular H_2 d) $NADPH_2$

2. In electron transport system, which of the following acts as a final hydrogen acceptor
   a) Oxygen b) Hydrogen c) Calcium d) Ubiquinone

3. If a starving plant is provided with glucose, the rate of respiration would
   a) First rise then fall b) Become constant c) Decrease d) Increase

4. Which one is product of aerobic respiration?
   a) Malic acid b) Ethyl alcohol c) Lactic acid d) Pyruvic acid

5. Given below the diagrammatic presentation of ATP synthesis in mitochondria. Identify A-C and Choose the correct option accordingly



   a) $A - H^+, B - F_1, C - F_0$ b) $A - 3H^+, B - F_0, C - F_1$
   c) $A - 2H^+, B - F_0, C - F_1$ d) $A - 5H^+, B - F_1, C - F_0$

6. In Krebs' cycle,
   a) ADP is converted into ATP
   b) Pyruvic acid is converted into CO_2 and H_2O
   c) Glucose is converted into CO_2
   d) Pyruvic acid is converted into ATP

7. Decline in the activity of the enzyme Hexokinase by glucose-6-phosphate is caused by
   a) Non-competitive
   b) Competitive inhibitors
   c) Allosteric modulators
   d) Denaturation of enzyme

8. In which of the following reactions of glycolysis, oxidation takes place?
   a) Glucose 6-PO_4 to fructose 6-PO_4
   b) Glyceraldehydes 3-phosphate to 1, 3-diphosphoglycerate
   c) 1,3-diphosphoglycerate to 3-phosphoglycerate
   d) 2-phosphoglycerate to phosphoglycerate

9. During conversion of pyruvic acid into acetyl Co-A, pyruvic acid is
   a) Oxidized b) Reduced c) Isomerized d) Condensed

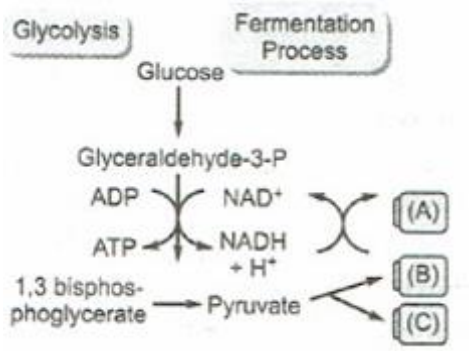
10. During anaerobic respiration in yeast
   a) H_2O and CO_2 are end-products
   b) CO_2 , ethanol and energy are end-products
   c) CO_2 , and H_2O are end-products
   d) CO_2 , acetic acid and energy are end-products

11. Choose the correct combination of A and B according to NCERT text book.
   All living organisms need …A… for carrying out daily life activities and is obtained by …B… of macromolecules
   a) A-oxygen; B-reduction b) A-energy; B-reduction
   c) A-energy; B-oxidation d) A-oxygen; B-oxidation

12. Most of the biological energy is supplied by mitochondria through
   a) Breaking of proteins b) Reduction of $NADP^+$
   c) Breaking of sugars d) Oxidising TCA (tricarboxylic acid) substrate

13. Chemiosmotic mechanism of ATP production in aerobic respiration was given by
   a) Krebs b) Calvin c) Hatch and Slack d) Peter Mitchell

14. Choose the correct combination of labeling the molecules involved in the pathway of anaerobic respiration in yeast



   a) A – Ethanol, B – CO2 , C – Acetaldehyde
   b) A - CO2 , B – Ethanol, C- Acetaldehyde
   c) A - CO2, B - Acetaldehyde, C- Ethanol
   d) A – Ethanol, B - Acetaldehyde, C - CO2

15. Which of the metabolites is common to respiration mediated breakdown of fats, carbohydrates and proteins?
    a) Glucose-6-phosphate
    b) Fructose, 6-bisphosphate
    c) Pyruvic acid
    d) Acetyl Co-A

16. In succulent plants like Opuntia, the RQ value will be
    a) Less than one
    b) More than one
    c) Infinite
    d) Zero

17. The pyruvic acid formed during glycolysis is oxidized to CO_2 and H_2O in a cycle called
    a) Calvin cycle
    b) Nitrogen cycle
    c) Hill reaction
    d) Krebs' cycle

18. Respiratory enzymes are present in the following organelle
    a) Peroxisome
    b) Chloroplast
    c) Mitochondrion
    d) Lysosome

19. An ATP molecule is structurally most similar to a molecule of
    a) RNA nucleotide
    b) DNA nucleotide
    c) Amino acid
    d) Fatty acid

20. Read the following and choose the option containing correct pair
    I. DCMU Herbicide Inhibitor of non-cyclic electron transport
    II. PMA Fungicide Reduce transpiration
    III. Colchicine Alkaloid Causes male sterility
    IV. Soilrite Sodium alginate Encapsulation of somatic embryos
    a) I and II
    b) I and III
    c) II and III
    d) II and IV