Very Short Answer Type Questions

Q. 1. Which enzyme is required for the synthesis of ATP?

Ans. ATP synthetase.

Q. 2. Name the substance or product common to both aerobic as well as anaerobic pathway.

Ans. Pyruvic acid.

Q. 3. What role is played by ATPase?

Ans. ATPase helps in the formation of ATP from ADP, Pi and energy by downward flow of protons.

Q. 4. In what form the energy released by oxidation is stored in the body?

Ans. In high - energy bonds of ATP.

Q. 5. What does glycolysis literally means?

Ans. Glycolysis literally means sugar splitting.

Q. 6. Which intermediate compound is a connecting link between glycolysis and Kreb's cycle?

Ans. Acetyl CoA is a connecting link between Glycolysis and Kreb's cycle.

Q. 7. What is terminal oxidation?

Ans. It is the name of oxidation found in aerobic respiration that occurs towards the end of catabolic process and involves the passage of both electrons and protons of reduced co-enzymes to oxygen.

Q. 8. What is phosphorylation?

Ans. Phosphorylation is the reaction through which ATP is synthesized from ADP and inorganic phosphate.

Q. 9. What is photophosphorylation?

Ans. Light driven synthesis of ATP is called photophosphorylation.

Q. 10. What is significance of $F_0 – F_1$ combination in mitochondria?

Ans. It maintains the proton gradient on the two sides of the membrane.

Q. 11. Why is R.Q. is less than one for fats?

Ans. A fat molecule contains less oxygen as compared to carbon, hence, consume more oxygen and evolve less CO_2.

Q. 12. What role is played by ATPase?

Ans. ATPase helps in the formation of ATP from ADP, Pi and energy by downward flow of protons.

Q. 13. What is the full form of EMP pathway?

Ans. EMP = Embden - Mayerhof - Parnas pathway.

Q. 14. What is respirometer?

Ans. Instrument for measuring respiratory quotient as well as rate of respiration is called as respirometer.

Q. 15. Why oxygen is the ultimate acceptor of electrons in ETS?

Ans. Oxygen is the ultimate acceptor of electron is ETS because it becomes reactive and combines with protons to form metabolic water.

Q. 16. What is proton gradient?

Ans. The difference in the proton concentration on the outer and inner side of the inner mitochondrial membrane is known as proton gradient.

Q. 17. What are the alternative names for pentose phosphate pathway?

Ans. The alternative names for pentose phosphate pathway are oxidative phosphate pathway and Hexose monophosphate shunt (HMP).