



INDIAN SCHOOL DARSAIT  
DEPARTMENT OF BIOLOGY



Subject : BIOLOGY Topic : Respiration in Plants

Date: 19-11-2018

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Name of the Student: \_\_\_\_\_ Class & Division : XI Div. \_\_\_ Roll Number : \_\_\_

**Answer of following**

- 1) What is respiratory quotient? 1
- 2) Name the end product of glycolysis. 1
- 3) Where is ETS located in the mitochondria? 1
- 4) Which of the given below exhibit greater rate of respiration? 1  
(a) Germinating seeds (b) Growing shoot apex.
- 5) Which of the following will release more energy on oxidation and arrange it in the ascending order based on energy released? 1  
(a) 1 gm of carbohydrate (b) 1 gm of fat (c) 1gm of protein.
- 6) Write the equation where lactate dehydrogenase is involved as a catalyst. 1
- 7) At what percent of alcohol concentration does Yeast poisons themselves to death? 1
- 8) Which enzyme is involved in breakdown of sucrose to glucose and fructose? 1
- 9) Name the step in TCA cycle which is involved in substrate level of phosphorylation. 1
- 10) Which enzyme is involved in the phosphorylation of glucose in glycolysis? 1
- 11) Energy is released during the oxidation of compounds in the respiration. How is this energy stored and released when needed? 1
- 12) Write a short note on fermentation. 2
- 13) 'Anaerobic respiration produces less energy'. Justify this statement. 2
- 14) Why is respiratory pathway referred as Amphibolic pathway? 2
- 15) When a substrate is being metabolised, energy is not released in one step rather in multiple step. Why? 2
- 16) What is oxidative decarboxylation? What happens to pyruvate immediately after the reaction? Name the enzyme involved in the reaction. 3
- 17) Explain glycolysis with the help of a diagram. How many ATP & NADH are produced by it? 5
- 18) Describe the Krebs cycle and give the energetics for glucose at the end of the cycle. 5



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Subject: BIOLOGY Topic : PLANT GROWTH AND DEVELOPMENT Date: 19-11-2018

**Answer of following**

- 1) Which plant regulators are added to increase female flowers in cucumber? 1
- 2) Why is plant growth indeterminate? 1
- 3) What does an overripe banana release in a basket which affects others bananas? 1
- 4) Which part of the part perceives light during photo-periodism? 1
- 5) Define Vernalisation. 1
- 6) What is apical dominance? 1
- 7) Expand: 1
  - (i) IAA
  - (ii) NAA
- 8) Name the PGR used as weedicide to eliminate dicot weeds. 1
- 9) What are the different phases of growth in sigmoid growth? 2
- 10) What are the functions of Gibberlin? 2
- 11) Identify the plant growth regulators: 3
  - a) Induce rooting in a twig.
  - (b) Quickly ripen a fruit.
  - (c) Delay leaf senescence.
  - (d) Induce growth in axillary buds.
  - (e) 'bolt' a rosette plant.
  - (f) Induce immediate stomatal closure in leaves.
- 12) (a) What is plasticity? 3
  - (b) Why is abscisic Acid called the Stress hormones in plants?
  - (c) Define parthenocarpy.
- 13) What is differentiation, dedifferentiation and redifferentiation? 3
- 14) What would be expected to happen if: 3
  - (a) GA3 is applied to rice seedlings.
  - (b) Dividing cells stop differentiating
  - (c) A rotten fruit gets mixed with unripe fruits.
  - (d) You forgot to add cytokinin to the culture medium
  - (e) Induce immediate stomatal closure in leaves
  - (f) GA is added to sugarcane plantation.