



V.M.G.R.R SRI SARADA SAKTHI MAT. HR. SEC. SCHOOL

STD: XI

BIOLOGY

MARKS-70

**BIO BOTANY****MARKS-35****I. CHOOSE THE CORRECT ANSWER : 8X1=8**

- For every CO<sub>2</sub> molecule entering the C<sub>3</sub> cycle, the number of ATP & NADPH required
  - 2ATP 1 2NADPH
  - 2ATP 13NADPH
  - 3ATP 1 2NADPH
  - 3ATP 1 3NADPH
- Identify true statement regarding light reaction of photosynthesis.
  - Splitting of water molecule is associate with PS I.
  - PS I and PS II involved in the formation of NDPH1H1.
  - The reaction center of PS I is Chlorophyll a with absorption peak at 680 nm.
  - The reaction center of PS II is Chlorophyll a with absorption peak at 700 nm.
- During oxidation of two molecules of cytosolic NADH 1 H<sub>1</sub>, number of ATP molecules produced in plants are
  - 3
  - 4
  - 6
  - 8
- The compound which links glycolysis and Krebs cycle is
  - succinic acid
  - pyruvic acid
  - acetyl CoA
  - citric acid
- Assertion (A): Oxidative phosphorylation takes place during the electron transport chain in mitochondria.  
Reason (R): Succinyl CoA is phosphorylated into succinic acid by substrate phosphorylation.
  - A and R is correct. R is correct explanation of A
  - A and R is correct but R is not the correct explanation of A
  - A is correct but R is wrong
  - A and R is wrong.
- If the diameter of the pulley is 6 inches, length of pointer is 10 inches and distance travelled by pointer is 5 inches. Calculate the actual growth in length of plant.
  - 1.5inches
  - 6 inches
  - 12 inches
  - 30 inches
- \_\_\_\_\_ is the powerful growth inhibitor
  - Ethanol
  - Cytokinins
  - ABA
  - Auxin
- Select the correctly matched one
  - Human urine i) Auxin -B
  - Corn gram oil ii) GA<sub>3</sub>
  - Fungus iii) Abscisic acid II
  - Herring fish iv) Kinitin sperm
  - Unripe maize v) Auxin A grains
  - Young cotton vi) Zeatin bolls
  - A-iii, B-iv, C-v, D-vi, E-i, F-ii, b) A-v, B-i, C-ii, D-iv, E-vi, F-iii,
  - c) A-iii, B-v, C-vi, D-i, E-ii, F-iv, d) A-ii, B-iii, C-v, D-vi, E-iv, F-i

**II. Answer any four of the following :****4X2=8**

9. Two groups (A & B) of bean plants of similar size and same leaf area were placed in identical conditions. Group A was exposed to light of wavelength 400-450nm & Group B to light of wavelength of 500-550nm. Compare the photosynthetic rate of the 2 groups giving reasons.

10. Define respiratory quotient.

11. Define Seed Germination.

12. Define Photoperiodism.

13. Draw the Structure of Mitochondria and label the parts.

14. Differences between cyclic photophosphorylation and non-cyclic photophosphorylation.

**III. Answer any three of the following :****3X3=9**

15. Give a brief account on Programmed Cell Death (PCD)

16. Respiratory quotient is zero in succulent plants. Why?

17. Explain the reactions taking place in mitochondrial inner membrane.

18. Define the following terms Apical dominance, ii-Bolting, iii. Richmond long effects

19. Explain the Experiment to prove oxygen evolved during Photosynthesis.

**IV. Answer all the questions :****2X5= 10**

20. Write the flowchart of glycolysis

**OR**

When there is plenty of light and higher concentration of O<sub>2</sub>, what kind of pathway does the plant undergo? Analyse the reasons.

21. Describe the mechanism of photoperiodic induction of flowering.

**OR**

In Botany class, teacher explains, Synthesis of one glucose requires 30 ATPs in C<sub>4</sub> plants and only 18 ATPs in C<sub>3</sub> plants. The same teacher explains C<sub>4</sub> plants are more advantageous than C<sub>3</sub> plants. Can you identify the reason for this contradiction?

**BIO- ZOOLOGY****Marks -35****I. CHOOSE THE CORRECT ANSWER :****8X1=8**

1.

**II. Answer any four of the following :****4X2=8**

9.

**III. Answer any three of the following :****3X3=9**

15.

**IV. Answer all the questions :****2X5= 10**

20.

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