



KAMALAMMAL MATRIC. HR. SEC. SCHOOL

Half Portion

Max. Marks : 70

XIth Biology

Time : 2.30 Hrs.

Bio-Botany (35 marks)

I. Answer the following questions:

8 x 1 = 8

1. Select the mismatch pair

- | | | |
|------------------------|---|---------|
| a) Hard wood | - | Morus |
| b) Soft wood | - | Pinus |
| c) Ring porous wood | - | Quercus |
| d) Diffuse porous wood | - | Rubra |

2. Write the correct statements:

Assertion (A): Piliferous layer of the root has two types of epidermal cells, long cells and short cells

Reasons (R) : The long cells are called trichoblasts

- | | |
|--------------------------------|--------------------------------|
| a) A and R is correct | b) A and R is wrong |
| c) A is wrong but R is correct | d) A is wrong but R is correct |

3. Find out the correct statements:

- Respiration is responsible for generation of ATP
- Discovery of ATP was made by Lipman
- ATP is a nucleotide consisting of base – Cytosine
- The energy transformation concept was established by Karl Lohman

- | | |
|------------------------------------|---|
| a) 1 and 2 correct, 3 and 4 wrong | b) 3 and 4 are correct, 1 and 2 are wrong |
| c) 1 is correct, 2, 3, 4 are wrong | d) 2, 3, 4 are correct, 1 is wrong |

4. Match the following:

- | | | |
|-------------------------|---|----------------|
| i). Necrosis | - | (i) Calcium |
| ii). Hooked leaf tip | - | (ii) Potassium |
| iii). Die back of shoot | - | (iii) Copper |
| iv). Little leaf | - | (iv) Zinc |

- | | |
|--------------------------------|--------------------------------|
| a) 1 (ii) 2 (i) 3 (iv) 4 (iii) | b) 1 (ii) 2 (i) 3 (iii) 4 (iv) |
| c) 1 (iv) 2 (iii) 3 (ii) 4 (i) | d) 1 (iii) 2 (ii) 3 (i) 4 (iv) |

5. Find out wrong statement:

- Each chloroplast contains 40 to 80 grana

- b) Chloroplast contains 30 – 35% phospholipids
 c) Each granum consists of 5 to 30 thylakoids
 d) Thylakoid disc size is 0.25 to 0.8 micron
6. Respiratory quotient of Malic acid is ____.
- a) 1 b) 1.33 c) 0 d) 0.36
7. **Complete the following:** $PEP + CO_2 \xrightarrow{A} B$, Identify A and B
- a) A – PEP Carboxylase, B - OAA b) A – RUBP Carboxylase, B - OAA
 c) A – Transferase, B – OAA d) A – PEP Carboxylase, B – Succinic acid
8. In pure water osmotic potential is ____.
- a) equal to solute potential b) zero
 c) less than solute potential d) decreases with increase of solutes

II. Answer any four of the following questions:

4 x 2 = 8

9. What are hydathodes?
 10. Mention two important products obtained from bark.
 11. What is the significance of imbibition?
 12. What is aeroponics?
 13. What are Quantasomes?
 14. What is oxidative phosphorylation?

III. Answer any three of the following questions:

3 x 3 = 9

15. What is the significance of Krebs's cycle?
 16. Draw and label the parts of T.S of Dicof leaf.
 17. Differentiate phellem and phelloderm.
 18. What is Red drop (or) Emerson's first effect?
 19. Explain any two macronutrients, their role and deficiency diseases.

IV. Answer the following questions:

2 x 5 = 10

20. Explain the stages involved in nitrogen cycle.

(OR)

Write difference between C_3 and C_4 plants.

21. Draw the schematic representation of calvin cycle.

(OR)

Write a note on types of vascular bundles.

Bio-Zoology (35 marks)**I. Choose the correct answer:****8 x 1 = 8**

1. Match each of the following substance with its mode of transpiration in proximal tubular reabsorption

- | | | |
|------------------|---|---------------------------|
| a) Na^+ | - | Simple diffusion |
| b) Glucose | - | primary active transport |
| c) Urea | - | indirect active transport |
| d) Plasma | - | paracellular transport |
| e) Proteins | - | facilitated diffusion |
| f) Water | - | endocytosis |

2. The protein present in the thin filament is _____.

- a) myosin b) actin c) pectin d) leucin

3. Which of the given option show all wrong statements for thyroid gland

- i). It inhibits process of RBC formation
 ii). It helps in maintenance of water and electrolytes
 iii). Its more secretion can reduce blood pressure
 iv). It stimulates osteoblast

- a) (i) and (ii) b) (iii) and (iv) c) (i) and (iv) d) (i) and (iii)

4. Choose the correct statement

- a) Mineralocorticoides regulate water and electrolyte balance
 b) Aldosterone stimulates reabsorption of chloride ions
 c) Cortisol is a mineralocorticoid
 d) Laughing increases the adrenaline levels in the body

5. Silk is obtained from _____.

- a) Laccifer lacca b) Nosema bombycis
 c) Attacus ricini d) Athacus mylitta

6. Say True or False:

- a) A worker bee feeding on Royal Jelly becomes queen bee _____.

7. Kidney stones are produced due to deposition of uric acid and _____.

- a) silicates b) minerals c) calcium carbonate d) calcium oxalate

8. Acromion is seen in _____.

- a) pelvic girdle b) vertebral column
c) head d) pectoral girdles

II. Answer all the following questions:

$$4 \times 2 = 8$$

9. How is urea formed in the human body?
10. What is foramen magnum?
11. What are the symptoms of Tetany?
12. What is Isinglass?

III. Answer any three of the following questions [Q.No. 15 Compulsory]:

3 x 3 = 9

13. Write the advantages of vermicomposting.
14. Differentiate between actin and myosin filament.
15. Write the role of oestrogen in ovulation.
16. How is a cocoon formed?

IV. Answer any two of the following questions:

2 x 5 = 10

- 17.Explain the structure of Nephron.
- 18.Comment on the functions of adrenalin.
- 19.Explain the advantages of aquaponic gardening.
- 20.What is the function of antidiuretic hormone? Where is it produced and what stimuli increases or decreases its secretion?

*** All the Best ***

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