

Sethu Bhaskara Matric. Hr. Sec. School
 class: 11 Half Yearly Exam Marks: 35
 Bio-Botany - Answer Key

PART - I

Marks

I. Choose the most suitable answer : $8 \times 1 = 8$

- | | |
|------------------------|---|
| 1. a) Prophage | 1 |
| 2. b) Bryophytes | 1 |
| 3. c) Adventitious bud | 1 |
| 4. a) Liliium | 1 |
| 5. b) George Palade | 1 |
| 6. c) Companion cells | 1 |
| 7. a) J.C. Bose | 1 |
| 8. d) Copper | 1 |

Section-II Write any 4 of the following $4 \times 2 = 8$

9. Differentiate Homolomerous and Heteromerous lichen

- | | | |
|--|--|-----|
| i) Algal cells evenly distributed in the thallus | ii) A distinct layer of algae and fungi is present | 1+1 |
|--|--|-----|

10. Epipetalous stamens:

Stamens are adnate to petals

2

11. Properties of Water:

 $4 \times \frac{1}{2} = 2$

- i) Adhesion and cohesion property
- ii) High latent heat of Vapourisation
- iii) High melting and boiling point
- iv) Universal solvent
- v) Specific heat capacity

2

		Marks
12.	Draw and label bicollateral vascular bundle:	
	i) Diagram	1
	ii) Labels	1
13.	Ascent of Sap:	
	The water within the xylem along with dissolved minerals from roots is called sap and its upward transport is called ascent of sap	2
14.	Chlorosis:	
	Breakdown of chlorophylls leading to yellowing of leaves	2
SECTION - III : Answer any three of the following: Question No: 18 is compulsory		3x3=9
15.	Velamen root:	
	i) Some epiphytic orchids develop a special aerial roots which hang freely in the air. These roots develop a spongy tissue called velamen.	1
	ii) It helps in absorption of moisture from the surrounding air	1
	Example: Vanda, Dendrobium, Aerides (any one)	1
16.	Structure of chromosome:	
	Diagram	2
	Labels (Any 4)	1
17.	Synapsis: pairing of homologous chromosomes takes place in zygotene stage of prophase I of meiosis is called synapsis.	3
18.	Trichoblast:	
	* In root the short epidermal cells are called trichoblast	3
	* They elongate into root hairs	

19. Respiratory quotient:

Marks

The ratio of volume of carbon dioxide given out and volume of oxygen taken in during respiration is called Respiratory Quotient (or) Respiratory ratio

2

$$RQ = \frac{\text{Volume of CO}_2 \text{ liberated}}{\text{Volume of O}_2 \text{ consumed}}$$

1

Section - IV

Give the answer for the following questions: 2x5=10

20. characteristic features of stem: [5-points]

- i) Usually the aerial portion of the plant.
- ii) positively phototropic and negatively geotropic
- iii) It has nodes and internodes
- iv) Bear vegetative bud for vegetative growth, Floral bud for reproduction
- v) Young stem is green and perform photosynthesis
- vi) Stem bears flowers and fruits
- vii) Branches arise exogenously
- viii) Bears multicellular hairs of different kinds

5x1=5

(or)

	Marks
<p>Special type of inflorescence!</p> <p>The inflorescence do not show any of the development pattern types.</p> <p>1. Cyathium: Collection of small unisexual flowers enclosed by common involucre. Female - solitary (pistil) Male - Scorpioid manner (single stamen) Ex: Euphorbia (or) pedilanthus</p>	2
<p>2. Hypanthodium:</p> <ul style="list-style-type: none"> * Receptacle globose, hollow * Unisexual flowers present on inner wall of receptacle * Small opening in receptacle - ostiole * Male - near ostiole; Female and neutral in mixed from middle below Ex: Banyan and pipal 	2
<p>3. Coenanthium:</p> <ul style="list-style-type: none"> * pistillate flower at the centre surrounded by male flowers * circular disc like fleshy open receptacle Ex. Dorstenia 	1
<p>21. T. s. of Dicot leaf:</p> <ul style="list-style-type: none"> * Diagram * Labels (any four) 	4
	1
(or)	
Flow chart of Glycolysis:	5

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