

<b>Anjuman Islam Janjira Degree College of Science, Murud Janjira, Raigad-402401 Affiliated to University of Mumbai</b>	
<b>Class: -F.Y.B.Sc. (G.S)</b>	<b>Subject: - Botany – II (Form and Function-I)</b>
<b>Semester: - II</b>	<b>Course code: -USBOT202</b>
<b>Exam Event: - Summer 2024 (FH)</b>	<b>Marks: - 100</b>
<b>Date: - 22/04/2024</b>	<b>Duration: - 03:00 Hours</b>

**N.B.:**

1. All Questions Are Compulsory.
2. Figures To The Right Indicate Full Marks.
3. Draw Neat And Labeled Diagram Wherever Necessary.

**Q.1 (A) Choose The Correct Option From The Following And Rewrite The Sentence. 10**

1. .... are dumbbell shaped in monocot leaves.  
a) Palisade cells   b) Subsidiary cells   c) Guard Cells   d) Stomatal aperture
2. Cells surrounding the guard cells are called as ..... cells.  
a) Accessory   b) Subsidiary   c) Motor   d) Bulliform
3. The thick walled dead cells consisting of fibres and sclerides are known as .....  
a) Sclerenchyma   b) Collenchyma   c) Phloem   d) Parenchyma
4. Dicot leaf is also called ..... leaf.  
a) Dorsal   b) Ventral   c) Dorsiventral   d) Isobilateral
5. .... demonstrated splitting of water by light using isolated chloroplasts.  
a) R. Hill   b) Ruben and Kamen   c) F.F.Blackman   d) Melvin Calvin
6. .... is the first stable compound formed during Calvin cycle.  
a) ATP   b) PGA   c) RuBP   d) NADPH
7. Plants during non-cyclic photophosphorylation produce.....  
a) ATP   b) NADPH   c) NADPH and ATP   d) NADH and ATP
8. Eugenol is obtained from.....  
a) Adulsa   b) Tulsi   c) Haldi   d) Aloe
9. Leaf decoction of ..... is a very good bronchodilator.  
a) Adulsa   b) Neem   c) Ginger   d) Curcuma
10. Purine, pyrimidine, cellulose, starch are example of ..... metabolites.  
a) Secondary   b) Primary   c) Tertiary   d) Quaternary

**Q.1 (B) ANSWER THE FOLLOWING IN ONE SENTENCE. 10**

1. Write any two functions of sclerenchyma tissue.
2. What are the components of phloem?
3. Give the chemical formula of photosynthesis.
4. Why chlorophyll A is called as essential pigment?
5. Name any two active constituents of *Zingiber officinale*.

**Q.2 ANSWER THE FOLLOWING QUESTIONS IN BRIEF (ANY TWO) 20**

1. Give the anatomical features of dorsiventral leaf.
2. What are complex tissues? Give an account of any one complex tissue.
3. Give the anatomical details of dicot stem.
4. What is tissue system? Write note on epidermal tissue system.

**Q.3 ANSWER THE FOLLOWING QUESTIONS IN BRIEF (ANY TWO)****20**

1. What is photophosphorylation? Explain non-cyclic photophosphorylation. Give its significance.
2. Explain briefly Calvin Cycle. Give schematic representation of Calvin Cycle.
3. Describe HSK Pathway.
4. Explain Crassulacean Acid Metabolism in plants.

**Q.4 ANSWER THE FOLLOWING QUESTIONS IN BRIEF (ANY TWO)****20**

1. What are metabolites? Write note on types of metabolites.
2. Write note on primary metabolites in plant.
3. Give the botanical name, family, source, active constituents, and medicinal uses of Tulsi.
4. What is Ayurveda and grandmas' pouch? Add a note on some of the important drugs from grandmas' pouch.

**Q.5 WRITE SHORT NOTES ON (ANY FOUR)****20**

1. Epidermal outgrowth
2. Diagrammatic representation of monocot stem
3. Role of light in photosynthesis
4. Phosphorylation
5. Adulsa
6. Active constituents and medicinal uses of sandalwood