

**SURENDRANATH COLLEGE**

INTERNAL ASSESSMENT

SEMESTER-1, 2018-19

SUBJECT-MLBG

CC/GE

Time- 1 Hour

Full Marks-30

|                     |                 |                  |
|---------------------|-----------------|------------------|
| <b>CU Reg. No.-</b> | <b>SECTION-</b> | <b>ROLL NO.-</b> |
|---------------------|-----------------|------------------|

|                              |                                     |
|------------------------------|-------------------------------------|
| <b>MARKS OBTAINED</b>        | Signature of Examiner-<br>With date |
| <b>MARKS CONVERTED TO 10</b> | Approved by HOD-<br>With date       |

## Question Booklet

| <b>Q<br/>No.</b> | <b>Question: Answer any 5 questions</b>  | <b>Marks</b>     |
|------------------|--|------------------|
| <b>1.</b>        | <p>a) Large vacuoles are usually found in</p> <ol style="list-style-type: none"> <li>1. Plant cell</li> <li>2. Animal cell</li> <li>3. Bacterial cell</li> <li>4. All the cells mentioned above</li> </ol> <p>b) Which of the following is the strongest</p> <ol style="list-style-type: none"> <li>1. Hydrogen bond</li> <li>2. Covalent bond</li> <li>3. Hydrophobic interaction</li> <li>4. Van der Waals interaction</li> </ol> <p>c) Which of the following came first on earth</p> <ol style="list-style-type: none"> <li>1. Eubacteria</li> <li>2. Archaeobacteria</li> <li>3. Fungi</li> <li>4. Proteobacteria</li> </ol> <p>d) Which of the following is smallest in size</p> <ol style="list-style-type: none"> <li>1. Plant cell</li> <li>2. Animal cell</li> <li>3. Bacterial cell</li> <li>4. Bacteriophage particle</li> </ol> | <b>(5X2 =10)</b> |

|  |  |  |
|--|--|--|
|  | <p>f) Humans cannot digest</p> <ol style="list-style-type: none"> <li>1. Starch</li> <li>2. Cellulose</li> <li>3. Glycogen</li> <li>4. Sucrose</li> </ol> <p>e) pH denotes</p> <ol style="list-style-type: none"> <li>1. Acidity and alkalinity of a solution</li> <li>2. Molar strength of a solution</li> <li>3. Polarity of a solvent</li> <li>4. Partition coefficient</li> </ol> <p>g) Lipids are</p> <ol style="list-style-type: none"> <li>1. An important biomolecule</li> <li>2. Predominant in plasma membrane</li> <li>3. Esters of fatty acid</li> <li>4. All of the above</li> </ol> <p>h) Bright field microscope means</p> <ol style="list-style-type: none"> <li>1. Field is dark and the smear is bright</li> <li>2. Field is bright and the smear is dark</li> <li>3. Both the field and the smear are bright</li> <li>4. None of the above</li> </ol> <p>i) Relationship between Resolving power and limit of resolution :</p> <ol style="list-style-type: none"> <li>1. Inversely proportional</li> <li>2. Directly proportional</li> <li>3. Equal to each other</li> <li>4. No relationship can be drawn</li> </ol> |  |
|--|--|--|

| <i><b>Q No.</b></i> | <i><b>Question: Answer any 2 questions (2 X 5 = 10)</b></i>  | <i><b>Marks</b></i>                    |
|---------------------|--|--|
| <i><b>2.(a)</b></i> | What do you mean by Hydrogen bond? Discuss the role of hydrogen bonds in maintaining the structure of DNA and protein.   | <i><b>1+4</b></i>                      |
| <i><b>2.(b)</b></i> | What do you mean by resolving power of a microscope? What is meant by numerical aperture?<br>Define osmosis. What is the difference between active transport and facilitated diffusion ? | <i><b>2+3</b></i><br><i><b>2+3</b></i> |
| <i><b>2.(c)</b></i> | What is aberration? How can you calculate the total magnification of a light microscope? What is empty magnification?  | <i><b>2+2+1</b></i>                    |
| <i><b>2.(d)</b></i> |  |  |

| <i><b>Q No.</b></i> | <i><b>Question: Answer any 1 question (1 X 10 = 10)</b></i> | <i><b>Marks</b></i> |
|---------------------|---|---------------------|
|                     |   |                     |

|              |   |                |
|--------------|---|----------------|
| <b>3.(a)</b> | What do you mean by unsaturated fatty acid? Discuss their role in maintaining membrane fluidity. What are glycolipids? Comment on their role and asymmetric distribution in membrane. | <b>2+3+2+3</b> |
| <b>3.(b)</b> | Distinguish between light microscope and electron microscope. Briefly describe the staining procedure of electron microscope. What is scanning electron microscope?                   | <b>4+3+3</b>   |

**Answer**







