

**B.Sc. Semester - 2 (CBCS) Examination**  
**March/April -2019 (New Course)**  
**BIO-CHEMISTRY(CORE)**

Time: 2:30 Hours

Marks: 70

**Instructions:**

1. All questions are compulsory.
  2. Figures to the right indicate marks.
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**Q.1 (A) Answer the following (One mark each)**

4

1. Give at least two examples of prokaryotic organisms.
2. The term “Cell” was first coined by \_\_\_\_\_.
3. State the function of ribosomes in plant cell.
4. Define composition of plasma membrane.

**Q.1 (B). Answer in detail (Any one out of two)**

3

1. Write a note on viroids.
2. Explain role of intermediate.

**Q.1 (C). Write a note on (Any one out of two)**

7

1. Describe in details about cytoskeleton elements.
2. Define plant and animal cell with labelled diagram.

**Q.2 (A) Answer the following (One mark each)**

4

1. What is nucleolus?
2. Golgi complex found in most prokaryotic cell – True/False.
3. Endoplasmic reticulum helps in protein and lipid synthesis – True /False.
4. Explain photosynthesis organelles.

**Q.2 (B). Answer in detail (Any one out of two)**

3

1. Write a short note on chloroplast.
2. Write about Glyoxysomes.

**Q.2 (C). Write a note on (Any one out of two)**

7

1. Discuss the Golgi apparatus with labelled diagram.
2. Describe Microbodies in detail.

**Q.3 (A) Answer the following (One mark each)**

4

1. Write about cyclin.
2. The term “Mitosis” was coined by \_\_\_\_\_.
3. DNA is replicate in S phase – True /False.
4. Define the term chiasma.

|                                                                   |          |
|-------------------------------------------------------------------|----------|
| <b>Q.3 (B). Answer in detail (Any one out of two)</b>             | <b>3</b> |
| 1. Write physiological importance of mitosis.                     |          |
| 2. What is cytokinesis? Explain in detail.                        |          |
| <b>Q.3 (C). Write a note on (Any one out of two)</b>              | <b>7</b> |
| 1. Meiosis cycle.                                                 |          |
| 2. Write detailed steps of cell cycle with suitable figure.       |          |
| <b>Q.4 (A) Answer the following (One mark each)</b>               | <b>4</b> |
| 1. Define ATPase.                                                 |          |
| 2. Who coined the fluid mosaic model?                             |          |
| 3. Write about simple diffusion.                                  |          |
| 4. Enlist chemical components of Cell wall.                       |          |
| <b>Q.4 (B). Answer in detail (Any one out of two)</b>             | <b>3</b> |
| 1. Discuss FRAP experiment.                                       |          |
| 2. Explain active transport mechanism.                            |          |
| <b>Q.4 (C). Write a note on (Any one out of two)</b>              | <b>7</b> |
| 1. Facilitate diffusion.                                          |          |
| 2. Fluid mosaic model.                                            |          |
| <b>Q.5 (A) Answer the following (One mark each)</b>               | <b>4</b> |
| 1. Stomata shut off during day light – True/False.                |          |
| 2. What is Hill reaction?                                         |          |
| 3. Atmospheric nitrogen converted in _____ by nitrogenase enzyme. |          |
| 4. What is the function of gibberellin?                           |          |
| <b>Q.5 (B). Answer in detail (Any one out of two)</b>             | <b>3</b> |
| 1. Discuss light independent reaction.                            |          |
| 2. Explain ammonia assimilation.                                  |          |
| <b>Q.5 (C). Write a note on (Any one out of two)</b>              | <b>7</b> |
| 1. CAM metabolism.                                                |          |
| 2. Nitrogen fixation.                                             |          |