647510 **0301212C1010** **Seat No :_____**

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

Time: 2:30 Hours **Marks: 70**

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate marks.

Q.1 (A).Answer the following (One mark each) **4**

1. What is function of endoplasmic reticulum in animal cell?
2. Enlist the component of cell.
3. Define nucleic acid.
4. Define function of chloroplast in plant cell.

Q.1(B). Answer in brief (Any one out of two) **2**

1. What is viroids?
2. Explain structure organization of prokaryotic organism.

Q.1 (C). Answer in detail (Any one out of two) **3**

1. Write a note on prokaryotic cell.
2. What is Prions? Explain in brief.

Q.1 (D). Write a note on (Any one out of two) **5**

1. Explain difference between prokaryotic and eukaryotic cell.
2. Describe animal cell with appropriate diagram.

Q.2 (A). Answer the following (One mark each) **4**

1. Define powerhouse of cell.
2. Draw the labelled diagram of Golgi complex.
3. Explain photosynthesis organelles.
4. Mitochondria is important organelles of bacteria. Its true or false?

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

1. Discuss the structure chemical composition of cell wall.
2. Explain function of Lysozomes in cell.

Q.2(C). Answer in detail (Any one out of two) **3**

1. Explain Microbodies and its sub type.
2. Explain function of plasma membrane.

Q.2(D). Write a note on (Any one out of two) **5**

1. Write a note on cell organelles isolation techniques in details.
2. Discuss the maternal origin of Mitochondria.

Q.3(A). Answer the following (One mark each) **4**

1. Explain G phase in cell cycle.
2. Mitosis Occur only in eukaryotic cell. Its true or false?
3. Meiosis process take place in cytoplasm. It's true or false?
4. The spindle form in _____phase.

Q.3(B). Answer in brief (Any one out of two) **2**

1. Explain the anaphase.
2. Explain physiological importance of mitotic process.

Q.3(C). Answer in detail (Any one out of two) **3**

1. Explain the origin and function of meiosis in eukaryotes.
2. Discuss the Metaphase.

Q.3(D). Write a note on (Any one out of two) **5**

1. Describe various stages of cell cycle with diagram.
2. Explain cell differentiation and cell division.

Q.4(A). Answer the following (One mark each) **4**

1. Who discover the Fluid mosaic model?
2. Give comments on flip-flop movement of lipids.
3. What is sodium-potassium adenosine triphosphatase?
4. The Cell only transport molecules from inside to outside its true or false?

Q.4(B). Answer in brief (Any one out of two) **2**

1. Explain membrane transport mechanisms.
2. Who discover the sodium-potassium pump.

Q.4(C). Answer in detail (Any one out of two) **3**

1. Write note on active transport mechanisms.
2. Explain structure and function of ATPase.

Q.4(D). Write a note on (Any one out of two) **5**

1. Explain facilitate diffusion with labeled diagram.
2. Explain Fluid mosaic model.

Q.5(A). Answer the following (One mark each) **4**

1. Give an example of symbiotic nitrogen fixing organism.
2. Explain the role cytokinin in plant.
3. Explain the contribution of Martinus Beijerinck.
4. Explain the function of stroma.

Q.5 (B). Answer in brief (Any one out of two) **2**

1. What is denitrification? Explain it.
2. Explain Dark reaction in brief.

Q.5 (C). Answer in detail (Any one out of two) **3**

1. Explain C4 carbon fixation.
2. Explain RuBisCo.

Q.5 (D). Write a note on (Any one out of two) **5**

1. Discuss the photosystem-II with diagram.
2. Photorespiration in plant.

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