

B.Sc. Semester - 2 (CBCS) Examination
March/April -2019 (New Course)
BIO-TECHNOLOGY(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. Water is non-polar molecule-True/False.
2. Contribution of J.D. Van der Waals in biochemistry.
3. Give an example of covalent bond with chemical structure.
4. What is PKa values?

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

1. Discuss the law of thermodynamics.
2. Explain acid-base buffer and its importance.

Q.1 (C). Write a note on (Any one out of two) 7

1. Law of thermodynamics.
2. Write a note on Biomolecules with function.

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

1. Starch consider as disaccharide - True/ False.
2. Give any two example of non-reducing sugar.
3. Give any two example of monosaccharide.
4. Explain Proteoglycan.

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

1. Write a short note on Disaccharide.
2. Write about heteropolysaccharide.

Q.2 (C). Write a note on (Any one out of two) 7

1. Write a note on polysaccharide.
2. Glycoconjugates.

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

1. What is protein folding?
2. Give an example of essential amino acid.
3. What is stop codon?
4. Enlist the aromatic amino acid.

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

1. Write about protein sequencing.
2. Discuss biotechnological importance of peptides.

Q.3 (C). Write a note on (Any one out of two)

7

1. Protein-protein interaction.
2. Classification protein.

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

4

1. The term “DNA as genetic material” coined by_____.
2. RNA contain thiamine nucleotide instead of uracil – True/ False.
3. What is nucleoside? Explain.
4. Explain function of mRNA.

Q.4 (B). Answer in detail (Any one out of two)

3

1. Explain type of RNA.
2. Explain denaturation of DNA.

Q.4 (C). Write a note on (Any one out of two)

7

1. DNA as genetic material.
2. Explain the Meselson–Stahl experiment.

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

4

1. What is trans-fat?
2. Vitamin B12 also known as _____.
3. What is omega fatty acid? Explain its importance.
4. Draw the structure of glycerol.

Q.5 (B). Answer in detail (Any one out of two)

3

1. Explain function and sources of vitamins C and B12.
2. List difference between saturated and unsaturated fatty acid.

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

7

1. Vitamin deficiency with suitable example.
2. Explain structure and function of phospholipids and steroids.
