

**MODEL QUESTION PAPER**

**BSC II YEAR**

**BIOTECHNOLOGY**

**FIRST PAPER**

**BIOPHYSICS AND BIOCHEMISTRY**

**TIME: 3 HRS**

**MAXIMUM MARKS: 40**

**MINIMUM MARKS: 15**

*Note: The question paper consists of two sections: A and B. attempt all the questions according to the given instructions.*

**Section A**

**Short Answer Type Questions**

**Note: Attempt all questions. Each question carries three marks (5 X 2 = 10)**

Q1. Write a short note on thermodynamic potential

Or

Explain entropy

Q2. Write a note on osmosis

Or

Explain measurement of pH

Q3. Describe hydrogen bond

Or

Define salts and buffer

Q4. Write short note on nucleotides

Or

Define tRNA

Q5. Explain allosteric enzyme

Or

Describe ribozymes

### **Section B**

#### **Long Answer Type Questions**

**Note: Attempt all questions. Each question carries five marks (5 X 6 = 30)**

Q6. Write a brief note on thermodynamics laws and their applications

Or

Explain thermodynamics system.

Q7. Explain autoradiography with radioactive labeling.

Or

Define concept of different crystal structure.

Q8. Define water as universal solvent.

Or

Write detail note on axiom of living matter.

Q9. Explain proteins as building blocks in detail.

Or

Write detail note on classification and properties of carbohydrates.

Q10. What are enzymes? Explain lock and key theory.

Or

Explain enzyme inhibition and its types.