UNIT 1

5-Mark Questions

Easy (2)

1. Define taxonomy and explain its importance in biology.CO1
2. What is biomimicry? Give Example.CO1

Moderate (2)

3. Compare and contrast Science and Engineering.CO1
4. Explain cell theory and its significance in modern biology.CO1

Hard (1)

5. Explain with diagram the similarities between human eye and camera.CO1

10-Mark Questions Easy (2)

1. Explain the Five Kingdom classification with salient feature from each.CO1
2. Write a detailed note on structure of animal cell with clearly labelled diagram.CO1

Moderate (1)

3. Discuss in detail the differences between Prokaryotes and Eukaryotes with proper examples.CO1

UNIT 2

5-Mark Questions

Easy (4)

1. Define carbohydrates. Classify them with examples.CO1
2. Write a short note on the functions of proteins.CO1
3. Explain the role of enzymes in biological systems.CO1

4. Mention the factors affecting enzyme activity.CO2

Moderate (2)

1. Describe the induced fit model of enzyme action with proper diagram.CO2

2. Explain the structural components of nucleosomes.CO2

Hard (2)

1. What are the different types of RNA found? Brief their functions.CO2

2. Write an account of lipids highlighting their structural types and biological importance.CO2

10-Mark Questions Easy (2)

1. Discuss classification of enzymes with one example each.CO1

2. Explain enzyme properties and mechanism of enzyme action in detail using suitable diagram.CO2

Moderate (2)

1. Describe the Lock and Key model of enzyme substrate reaction.CO2

2. Explain the process of β-Oxidation of fats with its pathway.CO2

Hard (1)

1. Write an essay on secondary structure of protein with proper diagrams.CO2

UNIT 3

5-Mark Questions

Easy (4)

1. Describe the process of DNA replication.CO2

2. Define transcription and mention the role of RNA polymerase.CO2

3. Differentiate between innate and acquired immunity.CO3

4. Write short notes on the structure and functions of antibodies.CO3

Moderate (2)

5. Explain the role of ribosomes in protein synthesis.CO3

6. Write briefly about the major organs of the immune system.CO3

Hard (1)

7. Classify antibodies and describe their biological functions.CO3

10-Mark Questions

Easy (2)

1. Explain the central dogma of molecular biology with a diagram.CO3
2. Discuss the steps of translation in detail.CO3

Moderate (1)

3. Describe innate and acquired immunity with examples.CO3

Hard (1)

4. Write an essay on microbes as infectious agents with suitable human disease examples (at least five).CO3

UNIT 4

5-Mark Questions

Easy (2)

1. Explain the role of biology in agriculture with examples.CO3
2. What are biosensors? Describe their applications briefly.CO4

Moderate (2)

3. Describe the applications of bioinformatics in modern biology.CO4
4. Explain the concept and applications of bio-robotics.CO4

Hard (1)

5. Write short notes on new-generation bio-fabricated products and their challenges.CO4

10-Mark Questions

Easy (1)

1. Discuss the applications of biology in the fields of medicine and industry.CO4

Moderate (1)

2. Explain 3D bio-printing and its potential applications in healthcare.CO4

Hard (1)

3. Write an essay on future challenges of bio-fabricated products with reference to sustainability and ethical issues.CO4