

BIOLOGY

Part – I	60 Marks
Part – II	60 Marks
Practical	30 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 60	Time: 2:00 Hours
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Chapter 1 : The Science of Biology

- 1.1 Biology and its Branches
- 1.2 Relation of Biology with Other Sciences
- 1.3 Careers in Biology
- 1.4 Quranic Instructions to Reveal the Study of Life
- 1.5 Science as a Collaborative Field
- 1.6 Scientific Method
- 1.7 Theory and Law/Principle
- 1.8 Malaria – An Example of Biological Method

Chapter 2 : Biodiversity

- 2.1 Biodiversity
- 2.2 Classification
- 2.3 Taxonomic Ranks
- 2.4 History of Classification
- 2.5 Domains of Living Organisms
- 2.6 Classification of Domain Eukarya
- 2.7 Status of Virus in Classification
- 2.8 Binomial Nomenclature

Chapter 3 : The Cell

- 3.1 Cell
- 3.2 Structure of Cell
- 3.3 Structural Advantages of Plant and Animal Cells
- 3.4 Cell Specialization
- 3.5 Stem Cells

Chapter 4 : Cell Cycle

- 4.1 Cell Cycle
- 4.2 Mitosis
- 4.3 Meiosis
- 4.4 Comparison between Meiosis and Mitosis

Chapter 5 : Tissues, Organs and Organ Systems

- 5.1 Levels of Organization
- 5.2 Organs and Organ Systems in Plants
- 5.3 Organs and Organ Systems in Humans
- 5.4 Homeostasis

Chapter 6 : Biomolecules

- 6.1 Biomolecules
- 6.2 Carbohydrates
- 6.3 Proteins
- 6.4 Lipids
- 6.5 Nucleic Acids
- 6.6 The Working of DNA and RNA

Chapter 7 : Enzymes

- 7.1 Metabolism
- 7.2 Enzymes

- 7.3 Mechanism of Enzyme Action
- 7.4 Factors that Affect the Activity of Enzymes
- 7.5 Enzyme Inhibition

Chapter 8 : Bioenergetics

- 8.1 ATP : The Cell's Energy Currency
- 8.2 Photosynthesis
- 8.3 Cellular Respiration

Chapter 9 : Plant Physiology

- 9.1 Nutrition in Plants
- 9.2 Transport in Plants
- 9.3 Transpiration
- 9.4 Transport of Water and Salts in Plants
- 9.5 Translocation of Food in Plants
- 9.6 Gaseous Exchange in Plants
- 9.7 Mechanisms for Excretion in Plants
- 9.8 Osmotic Adjustments in Plants

Chapter 10 : Reproduction in Plants

- 10.1 Types of Asexual Reproduction
- 10.2 Artificial Propagation
- 10.3 Sexual Reproduction in Plants

Chapter 11 : Biostatistics

- 11.1 Introduction of Biostatistics
- 11.2 Mean, Median and Mode
- 11.3 Bar Chart

Prescribed Book: **Biology for Part – I (Class –IX) (9th)**

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Part-II (Class-X)	Marks: 60	Time: 2:00 Hours
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SECTION: 3
LIFE PROCESSES

Unit-10 : GASEOUS EXCHANGE

- 10.1 Gaseous Exchange in Plants
- 10.2 Gaseous Exchange in Humans
 - 10.2.1 The Air Passageway
 - 10.2.2 The Lungs
 - 10.2.3 The Mechanism of Breathing
- 10.3 Respiratory Disorders (Bronchitis, Emphysema, Pneumonia, Asthma, Lung Cancer, Bad Effects of Smoking)

Unit-11 : HOMEOSTASIS

- 11.1 Homeostasis in Plants
 - 11.1.1 Removal of Extra Carbon Dioxide and Oxygen
 - 11.1.2 Removal of Extra Water
 - 11.1.3 Removal of other Metabolic Wastes
 - 11.1.4 Osmotic Adjustments in Plants