
Contents

- Solved Model Paper

Part-I

Physics

1. Measurement and Kinematics.....	3
2. Mechanics.....	23
3. Wave Motion and Sound.....	38
4. General Properties of Matter in Bulk State.....	53
5. Heat.....	67
6. Light.....	80
7. Electricity.....	97
8. Electromagnetism.....	111
9. Electron Physics.....	125
10. Radiation and Atomic Physics.....	136
11. Nuclear Structure.....	146

Part-II

Chemistry

GENERAL CHEMISTRY 1-33

1. Structure of Atom.....	3
2. Chemical Bond.....	8
3. Radioactivity.....	13
4. Electrochemistry.....	17
5. Oxidation and Reduction.....	21
6. Gaseous State of Matter.....	24
7. Volumetric and Qualitative Analysis.....	29

PHYSICAL CHEMISTRY 35-65

1. Chemical Equilibrium.....	37
2. Ionic Equilibrium.....	43

3. Solution.....	49
4. Catalyst.....	55
5. Colloidal-State	58
6. Thermochemistry and Chemical-Thermodynamics.....	61

INORGANIC CHEMISTRY

67–109

1. Periodic Table and Periodic Properties.....	69
2. Hydrogen and Its Compounds.....	73
3. Alkali-Metals (I A Group Elements).....	77
4. Alkaline Earth Elements (II A Group Elements).....	80
5. III A Group Elements.....	83
6. IV A Group Elements.....	87
7. V A Group Elements.....	91
8. VI A Group Elements.....	96
9. VII A Group Elements.....	99
10. Zero Group Elements (Inert Gases).....	102
11. Transition Elements.....	105

ORGANIC CHEMISTRY

111–180

1. Purification of Organic Compounds	113
2. Detection and Estimation of Elements.....	116
3. Isomerism.....	119
4. Reaction Mechanism.....	123
5. Classification and Nomenclature of Organic Compounds.....	128
6. Aliphatic Hydrocarbons and Alkyl Halides.....	132
7. Ethers and Alcohols.....	139
8. Aldehydes and Ketones.....	143
9. Carboxylic Acids and their Derivatives.....	147
10. Carbohydrates.....	154
11. Our Food and its Constitution.....	156
12. Aromatic Compounds.....	159
● Assess Yourself.....	166
● Glossary.....	174
● Answers (Assess Yourself).....	180

Part-III

Zoology

Zoology at a Glance.....	3–26
● Branches of Zoology.....	3
● Some Important Facts of Human Body.....	13

● Zoological Names of Some Important Animals Alongwith their Common Name.....	19
● Some Important Facts.....	23
1. Origin of Life, Organic Evolution, Mechanism of Evolution, and Eugenics.....	27
2. Animal Physiology.....	44
3. Taxonomy.....	76
4. Animal Tissues.....	81
5. Amoeba and Entamoeba Histolytica.....	89
6. Plasmodium.....	92
7. Porifera.....	95
8. Coelenterata.....	99
9. Aschelminthes.....	102
10. Annelida.....	105
11. Arthropoda.....	108
12. Rana (Frog).....	115
13. Rabbit.....	121
● Assess Yourself-1.....	129
● Assess Yourself-2.....	135
● Glossary of Terms.....	141
● Answers (Assess Yourself).....	152

Part-IV

Botany

Botany at a Glance.....	3-35
Branches of Botany.....	3
Famous Research Institutes and Gardens in India.....	5
Some Interesting Plants.....	7
Famous Botanists of India.....	8
Important Plant Diseases.....	9
Some Important Symbols and Abbreviations.....	12
Size and Dimensions of some Cellular Materials.....	12
Some Important Scientists and their Contributions.....	13
Botanical Names of some Economically Important Plants.....	18
● Some Useful Informations.....	22
● Revise Your Study.....	33
1. Cytology and Genetics.....	36-50
2. Ecology.....	51-58
3. External Morphology.....	59-63

4. Internal Morphology.....	64–70
5. Pollination, Fertilization and Embryology.....	71–75
6. Fruits and Dispersal of Fruits and Seeds.....	76–79
7. Bacteria and Viruses.....	80–85
8. Fungi and Lichens.....	86–91
9. Algae.....	92–98
10. Bryophyta.....	99–102
11. Pteridophyta.....	103–107
12. Gymnosperms.....	108–113
13. Taxonomy and Economic Botany.....	114–121
14. Plant Physiology, Nitrogen Cycle and Special Mode of Nutrition.....	122–139
● Miscellaneous Questions	140–142
● Assess Yourself (1–2)	143–155
● Some Important Definitions	156–179
● Answers Assess Yourself	180–180
