

GENERAL SCIENCE

Part – I	75 Marks
Part – II	75 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 75	Time: 2:30 Hours
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- Chapter-1 : Introduction and Role of Science
- 1.1 Introduction to the history of Science and Islamic injection of knowledge with special reference to the contribution by Muslim and Pakistani Scientists in the fields of Science.
 - 1.2 Branches of Science and their inter relationship.
 - 1.3 Role of Science and Technology and its impact for bringing improvement in the quality of life.
 - 1.4 Limitations.
- Chapter-2 : Our life and Chemistry
- 2.1 Description of three basic elements such as C, H₂, and O₂. Explanation of photosynthesis and respiration.
 - 2.2 Explanation of different allotropic forms of carbon; types of carbon compounds and their abundance in nature.
 - 2.3 Properties of water as a solvent, density of water and ice.
 - 2.4 Composition of air and role of the constituents in the properties of air. Rare gasses and their uses.
 - 2.5 Importance and application of elements like Na, K, Mg, P, Fe, Cl, I, F, for the maintenance of our health, agriculture and daily life.
- Chapter-3 : Biochemistry and Biotechnology
- 3.1 Definition of Metabolism. A brief description of Metabolism and fate of Carbohydrates, fats and proteins in human body, Enzymes and role in our daily life.
 - 3.2 What are Enzymes? Their role in Metabolism. Definition of Enzymes and role in our daily life.
 - 3.3 Blood and its function.
 - 3.4 DNA as hereditary material.
 - 3.5 Genetic Engineering.
 - 3.6 Improvement of crops and control of crop diseases.
 - 3.7 Antibiotics and Vaccines.
 - 3.8 Recycling of waste and scarce materials.
- Chapter-4 : Human Health
- 4.1 Major components of food.
 - 4.2 Food and Energy. Energy requirements regarding age, sex, body size, climate and working conditions.
 - 4.3 Balanced diet for babies, young, old, pregnant and feeding mothers.
 - 4.4 Definition of Nervous System with reference to Endospermic Glands.
 - 4.5 Description of different stages of life.
 - 4.6 Importance of exercise for physical fitness, healthy living and as a measure against obesity.
 - 4.7 First aid and its administration.
- Chapter-5 : Diseases, Causes and Prevention
- 5.1 Diseases, their causes i.e Virus, Bacteria, Parasites, Germs, etc and preventive measures.

- 5.2 How do Germs spread?
- 5.3 Protection from Germs and diseases caused by them.
- 5.4 Smoke, smoking and ill health. Different diseases caused by smoke & smoking.
- 5.5 Mental illness, its cure.
- 5.6 Difference between Drugs, Medicines and Narcotics, their uses and abuses on Society.
- Chapter-6 : Environment and Natural Resources
- 6.1 The atmosphere, and its different layers. Description of Green House effect and its importance. Different climatic patterns.
- 6.2 Different kinds of Pollution and their reduction. Effect of Pollution on House life.
- 6.3 Different kinds of Minerals and Fossil Fuels, their occurrence and uses. Need for conservation of natural resources.
- 6.4 Briefly discuss the crops and fruits of Pakistan. Production trends in principal crops; mechanization of agriculture, new implements.
- 6.5 Different dairy and poultry products and methods for their improvement.
- 6.6 Importance of wildlife, national parks, conservation of wildlife and endangered species.
- 6.7 Effects of rising production on environment, poverty and quality of life.

Part-II (Class-X)	Marks: 75	Time: 2:30 Hours
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- Chapter-7 : Energy
- 7.1 Introduction of Energy and its form.
- 7.2 Energy demands and different methods of acquiring Energy.
- 7.3 Development of new Energy resources. Explain different sources of Energy. Conventional and non-conventional.
- 7.4 Know how the Energy is measured. Methods and units of measurement of Energy and its uses.
- 7.5 Energy and the environment, specially with respect to thermal pollution and nuclear fuel hazards. Steps to minimize them.
- 7.6 Energy conservation. Conservation of Energy at home, school, industries, etc.
- Chapter-8 : Current Electricity
- 8.1 Introduction and description of various concepts relating to current Electricity.
- 8.2 Components of Circuits. Their working and use in electrical circuits.
- 8.3 Direct and alternating Current... introducing purposes along with their measures.
- 8.4 Process of Electric supply for domestic purposes along with their measures.
- 8.5 Electric shocks, burns, fire, explosion and safety precautions against them.
- 8.6 Introduction ammeter, voltmeter, multi meter, analogue and digital meter & their uses.
- Chapter-9 : Basic Electronics
- 9.1 Basic working principle semi-conductor diode.
- 9.2 Description of Radio waves, Radio systems, Television, Cable and Satellite TV.

- 9.3 Computers, microprocessors, their importance and uses in different fields.
- 9.4 Description of Information Technology, elaborate with simple example, Communication systems.
- Chapter-10 : Science and Technology
- 10.1 Description of the advancement of Science and Technology for the development of the country.
Function and uses of Laser Optical fiber system Satellites and Radar etc.
- 10.2 Simple introduction to radioactivity, properties, uses of radiations emitted by radio active substances and Radio Isotopes in various fields (health, agriculture, etc).
- 10.3 X-rays, Ultrasound, ECG, EEG, MRI, CT Scan, Angiography.
- 10.4 Some important Industries of Pakistan. Use of technology in some important Industries of Pakistan.
- Chapter-11 : Space and Pakistan Nuclear Program
- 11.1 Space exploration and its benefits to Science and Technology.
- 11.2 Pakistan's Space Programme (SUPARCO)
- 11.3 Pakistan's Nuclear Programme.
- 11.4 Dengue Fever

Prescribed Book: General Science

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