

# GENERAL SCIENCE

For Class X (marks 75)

## 1. Biochemistry and Biotechnology

- i. Definition of metabolism. A brief description of metabolism and fate of carbohydrates, fats and proteins, in human body.
- ii. What are enzymes? Their role in metabolism. Definition of enzymes and their role in our daily life.
- iii. Blood and its function
- iv. DNA as hereditary material
- v. Genetic engineering
- vi. Improvement of crops and control of crop diseases
- vii. Antibiotics and Vaccines
- viii. Recycling of waste and scarce materials

## 2. Man and Health

- i. Major components of food
- ii. Food and energy. Energy requirements regarding age, sex, body size, climate and working conditions.
- iii. Balanced diet for babies, young, old, pregnant and feeding mothers.
- iv. Definition of nervous system with reference to endospermic glands.
- v. – Description of different stages of life.  
– Transition from childhood.
- vi. Importance of exercise for physical fitness, healthy living and as a measure against obesity.
- vii. First aid and its administration.

## 3. Environment and Natural Resources

- i. The atmosphere and its different layers. Description of Green house effect and its importance. Different climatic pattern.
- ii. Different kinds of pollution and their reduction. Effect of pollution on human life.
- iii. Different kinds of Minerals and Fossil Fuels, their occurrence and uses. Need for conservation of natural resources.
- iv. Briefly discuss the crops and fruits of Pakistan. Production trends in principle crops; mechanization of agriculture, new implementations.
- v. Different dairy and poultry products and methods for their improvement.
- vi. Importance of wildlife, national parks, conservation of wildlife and endangered species.
- vii. Effects of rising population on environment, poverty and quality of life.

## 4. Current Electricity

- i. Introduction and description of various concepts relating to current electricity.
- ii. Components of circuits. Their working and use in electrical circuits.

- iii. Direct and Alternating current. Introducing their advantages and disadvantages.
  - iv. Process of electric supply for domestic purposes alongwith it measurement.
  - v. Electric shocks, burns, fire, explosion, and safety precautions against them.
  - vi. Introducing ammeter, voltmeter, multi meter, analogue and digital meter and their uses.
- 5. Science and Technology**
- i. Description of the advancement of science and Technology for the development of the country.
  - ii. Functions and uses of:
    - Lasers
    - Optical fiber system
    - Satellites and Radar, etc
  - iii. Simple introduction to radioactivity, properties, uses of radiations emitted by radio-active substances and radio isotopes in various fields (health, agriculture, etc.)
  - iv. X-rays, Ultrasound, ECG, EEG, MRI, CT-Scan, Angiography.
  - v. Some important industries of Pakistan. Use of technology in some important industries of Pakistan.
- 6. The Space and Pakistan Nuclear Program**
- i. Space exploration and its benefits to Science and Technology.
  - ii. Pakistan's Space Programme (SUPARCO).
  - iii. Pakistan's Nuclear Programme.

### **RECOMMENDED REFERENCE BOOKS FOR CLASS X**

The question papers will be syllabus oriented. However, the following books are recommended for reference and supplementary reading:

- 1. General Science  
National Book Foundation, Islamabad.
- 2. General Science  
Punjab Textbook Board, Lahore.
- 3. General Science  
Sindh Textbook Board, Jamshoro
- 4. General Science  
NWFP Textbook Board, Peshawar.
- 5. General Science  
Baluchistan Textbook Board, Quetta.