**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.