Syllabus

General Information

General Science X **Maximum Marks: 75**

Paper of General Science X consists of THREE Sections.

Section 'A': It consists of **15 Multiple Choice Questions (MCQs)** and **ALL** MCQs are to be answered. Each MCQ carries **1 mark.** The total marks for this section are **15.**

Section 'B': It consists of **10 Short-Answer Questions (SAQs)** out of which **6 (Six)** questions are to be answered. Each SAQ carries **5 marks.** The total marks for this section are **30.**

Section 'C': It consists of **5 Detailed-Answer Questions (DAQs)** out of which **3 (Three)** questions are to be answered. Each DAQ carries **10 marks.** The total marks for this section are **30.**

Subject: General Science **Class: X**

Theme		**Distribution of Questions**		
		Multiple Choice Questions	**Short Answer Questions**	**Detailed Answer Questions**
Electricity in Everyday Life	**Topics**	**MCQs 0-4**	**SAQs 0-3**	**DAQs 0-2**
	-Characteristics and effects of static charges -Practical application of static and current electricity (e.g. household appliances) -Identification of problems related to electrostatic charges in everyday situations			

	-Remedies to overcome problems related to electrostatic charges (e.g. use of lightning rods to protect buildings) -Household wiring and its typical components (e.g. parallel circuits with switches, fuses, circuit breakers, outlets) -Reason for using fuse and circuit breaker for a specific circuit -Identification of the safety measures to avoid and handle electric hazards -Careers that involve electrical technologies -Social, economic, and environmental costs and benefits of the methods of electrical energy production used in Pakistan			
Chemical Reactions and Their Practical Applications	**Topics**	**(MCQs) 0-4**	**(SAQs) 0-3**	**(DAQs) 0-2**
	-Characteristics that indicate that a chemical reaction has taken place -Applications of acid-base reactions in common products and processes (e.g. preparation of soap) -Chemical reactions to familiar processes encountered in everyday life (film processing, food processing, fabric, and hair dyeing, agriculture, pulp and paper, and mineral processing) -Methods for the disposal of waste chemicals and stuff (car batteries, tires, plastic, paints, or metals)			
Biotechnology	**Topics**	**(MCQs) 0-5**	**(SAQs) 0-4**	**(DAQs) 0-2**
	-Structure and function of nucleus and importance of hereditary material (chromosomes, genes, RNA, DNA) found in it -Relationship among nucleic acids (DNA and RNA, genes and chromosomes) -Molecular basis of heredity including DNA replication -Purposes and processes of cellular reproduction -Cell division (Mitosis and Meiosis) -Common genetic disorders (Thalassemia, Sickle Cell Anemia and Down Syndrome) -Role of genetic engineering and biotechnology in the present world (Cloning, transgenic plants, and animals, agriculture, forensics, livestock, dairy products, food processing, pharmaceutical)			

Water Resources	**Topics**	**(MCQs) 0-3**	**(SAQs) 0-3**	**(DAQs) 0-2**
	-Forms of water available on the earth (oceans, seas, lakes, rivers, springs, glaciers, underground water) -Freshwater resources in the world and Pakistan -Utilization of water resources in Pakistan and emerging issues -Threats to water resources (pollution, climate change, urban growth, landscape changes (deforestation) -Ideas for the sustainable development of water resources in Pakistan			
Environmental Problems and Management	**Topics**	**(MCQs) 0-4**	**(SAQs) 0-3**	**(DAQs) 0-2**
	-Identification of regional and global environmental problems (ozone layer depletion, global warming, acid rain, greenhouse effect, desertification, climate change, solid and hazardous wastes) -Natural disasters caused by earthquakes, storms including El Nino and La Nina -Identification of the legislation or laws on environmental problems -Control strategies for treating water and air pollutants -Harmful effects of the excessive use of TV, mobiles, and computers on individuals' health			
Science, Technology and Development	**Topics**	**(MCQs) 0-4**	**(SAQs) 0-3**	**(DAQs) 0-2**
	-Types, functions, and uses of lasers -Functions and uses of optical fiber system -Functions and uses of x-rays, ultrasound, ECG, EEG, MRI, CT-scan and angiography, radiography, radiotherapy, chemotherapy -Technologies used in the modern information age such as computer, telephone, fax, TV, radio, and mobiles -Disadvantages of excessive use of technology -Contribution of SUPARCO to the development of our country			

Model Paper

General Science X

SECTION A **Time: 25 minutes**

(Multiple Choice Questions)

Total Marks: 15

Q.1

Note: Attempt **ALL** questions from Section 'A'. Each question carries **ONE** mark.

1. ECG stands for_____.
   A) Electro Cerebral Gram B) Electro Cranium Gram C) Electro Cardio Gram D) Electro Coronary Gram
2. Demonstration of physiology of _____ is called angiography.
   A) Heart B) Liver C) Lungs D) Kidneys
3. _____ is used in the circuit as a safety measure.
   A) Wax B) Fan C) Bulb D) Fuse
4. _____ is an example of base.
   A) Cl B) NaOH C) NaCl D) HCl
5. _____disease is caused due to genetic disorder.
   A) Anemia B) Typhoid C) Thalassemia D) Obesity
6. _____ is done with the help of genetic engineering.
   A) Cloning B) Exercise Tolerance Test C) Cleaning teeth D) Physiotherapy
7. One km = _____ meters.
   A) 10 B) 100 C) 500 D) 1000
8. Desertification is caused due to scarcity of _____.
   A) Sand B) Water C) Salt D) Sugar
9. Ozone layer is made up of _____ oxygen atoms.
   A) One B) Two C) Three D) Four

10. Every normal human cell contains _____ pairs of chromosomes.
    A) 22 B) 23 C) 24 D) 25
11. _____ is a process of converting waste into reusable material.
    A) Orbiting B) Circulating C) Rotating D) Recycling
12. Fiber optics is used in TV, _____ and telephone.
    A) Glass B) Internet C) Hand pump D) Swing machine
13. _____ is measured in Watts and Kilowatts.
    A) Light intensity B) Mass C) Weight D) Electricity
14. _____ is a form of energy.
    A) Electricity B) matter C) Force D) Temperature
15. In anemia, the blood produces lower than normal amount of healthy _____.
    A) Water B) Plasma C) Red blood cells D) White blood cells

END OF SECTION 'A'

SECTIONS B & C

Time: 2 hours 35 minutes **Total Marks: 60**

SECTION 'B' **Total Marks: 30**

(Short Answer Questions)

Note: Attempt any **SIX** questions from Section 'B'. Each question carries **FIVE** marks.

Q.2 Identify the problems related to electrostatic charges in everyday situations.

Q.3 Highlight the significance of biotechnology in the present world.

Q.4 List the names of various forms of water available on the earth.

Q.5 Describe the contribution that SUPARCO has made in the development of our country.

Q.6 Point out the regional and global environmental problems.

Q.7 What is the role of acid-base reaction in the preparation of soap?

Q.8 Suggest three methods for the disposal of waste chemicals.

Q.9 Identify the relationship between genes and chromosomes.

Q.10 Describe the reason for using fuse and circuit breaker for a circuit.

Q.11 State the functions and uses of optical fiber system.

END OF SECTION 'B'

SECTION C

Total Marks: 30

(Detailed Answer Questions)

Note: Attempt any **THREE** questions from Section 'C'. Each question carries **TEN** marks.

Q. 12 List the common genetic disorders with examples.

Q.13 Describe the control strategies that can be used for treating air and water pollutants.

Q.14 Describe the functions of RNA and DNA.

Q.15 Identify the harmful effects of excessive use of TV and mobile.

Q.16 State the functions and uses of CT-scan.

END OF PAPER