

**USWA COLLEGE ISLAMABAD**  
**Syllabus of Science for Entry Test Class 7<sup>th</sup>**

**Cellular Organisation** Cell, organ, comparison of animal and plant cell, tissues, organs, organ system, organism.

**Reproduction in Plants** Sexual reproduction, Asexual reproduction, natural propagation of plants, artificial vegetative propagation, advantages of vegetative propagation.

**Human Digestive System** Human Digestive System, digestion, human digestive system, digestive disorders, physical digestion, chemical digestion, digestive enzymes.

**Matter As Particles** States of matter, particle theory of matter, diffusion, changes in state of matter, melting, evaporation, condensation

**Elements and Compounds** Elements, classification of elements, uses of elements, difference in atom, elements and molecules, compounds

**Mixtures** Mixture, types of mixtures, distinguish between elements, compounds and mixtures, alloys, separation of mixtures, solutions

**Energy** Energy, categories of energy, conversion of energy, types of energy, laws of conservation of energy, renewable and non-renewable sources of energy

**Electricity** Static electricity, types of charges, electricity, electric current, electric circuits, electric symbols, open and closed circuits, series and parallel circuits

**Magnetism** Magnetic field, Earth's magnetic field, magnetic field around conductor, types of magnet, applications of electromagnets. Magnetization and demagnetization

**Balanced Diet** Carbohydrates, Proteins, Fats & Oils, Vitamins & Minerals

**Reference Book :**

**National Book Foundation, for Class 6<sup>th</sup>**

**Paper Pattern for Class 7<sup>th</sup>**

Multiple Choice Questions (MCQs)	10 Marks
Short Questions (7 Questions and 2 marks each)	14 Marks
Long Question (1 Question of 6 marks)	06 Marks
Total Marks:	30 Marks

**USWA COLLEGE ISLAMABAD**  
**Syllabus of Science for Entry Test Class 8<sup>th</sup>**

**Plant System**

Root system, shoot system, leaves, transport, transpiration, photosynthesis, respiration in plants.

**Human Respiratory System and Circulatory System**

Aerobic & in-aerobic respiration, human respiratory system, circulatory system, structure of heart and its function.

**Physical and Chemical Changes**

Physical changes, chemical changes, states of matter and their properties

**Structure of an Atom**

Atom and its parts, Atomic number, mass number, distribution of electrons in shells

**Chemical Bonds**

Valency, ion, chemical formula, formation of different types of bonds, formation of ions

**Force and Motion**

Distance, displacement, speed, force, contact forces and non-contact forces, forces as action and reaction pairs

**Waves and Energy**

Waves, types of waves, transverse and longitudinal waves, properties of waves, sound waves and its properties, echo

**Heat and Temperature**

Temperature, temperature scales, heat, thermal expansion in solids and its types, modes of transfer of heat.

**Reference Book :**

**National Book Foundation, for Class 7<sup>th</sup>**

**Paper Pattern for Class 8<sup>th</sup>**

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Short Questions (7 Questions and 2 marks each)	14 Marks
Long Question (1 Question of 6 marks)	06 Marks
Total Marks:	30 Marks