

USWA COLLEGE ISLAMABAD
Syllabus of Science for Entry Test
Class 8th

Human Organ System:

Digestive System, Mouth, Esophagus, Stomach, Small Intestine, Large Intestine, Respiratory System, Parts of Respiratory System, Nose and Throat, Trachea, Bronchi and Lungs, How do We Breathe?, Common Diseases of Respiratory System, Common Cold, Pneumonia

Transport in Humans and Plants:

Human Blood Circulatory System, The Heart, Blood Vessels, Arteries, Capillaries, Veins, Heart Attack, High Blood Pressure, Transportation in Plants, Absorption of Water in Plants through Roots, Transpiration, Translocation

Reproduction in Plants:

Pollination, Kinds of Pollination, Agents of Pollination, Pollination by Wind, Pollination by Animals, Pollination by Water, Kinds of reproduction, Fertilization in Plants, Changes after Fertilization, Formation of Seeds, Seeds, Radicle, Plumule, Cotyledons, Fruit

Environment and Feeding Relationship:

Ecosystems, Parts of an Ecosystem, Biotic Components and their Relation with Food Chains and Food Web, Food Web

Water:

Cleaning of Water By Filtration, By Boiling, By Chlorination, Use of Potash Alum, Distillation, Uses of Water, How to Conserve Water?

Structure of an Atom:

Structure of an Atom, Atomic Number, Mass Number, Distribution of Electrons in Shells, Atomic Structure of Hydrogen, Helium, Lithium, Beryllium, Boron and Carbon Only, Valency, Ions, Molecules and Chemical Formula, Molecule, Chemical Formula

Physical and Chemical Changes and Processes:

Types of Changes, Physical Changes, Chemical Changes, Applications of Chemical Changes, Use of Hydrocarbons as Fuels, Use of Fertilizers in Agriculture, Harmful Effects of Improper Use of Fertilizers, how does Vegetable Oil Change into Fat?

Transmission of Heat:

Transfer of Heat, Conduction, Good and Bad Conductors, Everyday Applications of Conduction of Heat, Convection, Everyday Applications of Convection Current, Radiation, Everyday Application of Radiation of Heat

Dispersion of Light:

Refraction, Refraction in Different Media, Dispersion of Light, Why does White Light get Dispersed?, Rainbow Formation

Sound Waves:

What causes Waves?, Transverse and Longitudinal Waves, Transverse Waves, Longitudinal Waves, Wavelength, Speed, Amplitude and Frequency, Audible Frequency Range, Applications of Different Sounds

Circuits and Electric Circuits

Flow of Current, Types of Electric Circuit, Series Circuit, Disadvantages of Series Circuit, , Parallel Circuits, Advantages of Parallel Circuits, Over Series Circuit, How do Charges Flow?, Measuring Current, Voltage and Resistance, Electric Power, Why is Electricity Dangerous?, Electricity and Safety (Fuses, MCBs, Earth Wires, Three Pin Plug, ELCB)

Text Book :

Science for Class 7th (Punjab Text Book Board, Lahore)

USWA COLLEGE ISLAMABAD

Class 8th Entry Test Syllabus

English

01. **Composition:**

- Descriptive Paragraph WritingS on personalities, places, events
- Personal Letters/School Applications

02. **Comprehension:**

- Questions based on the given paragraph

03. **Grammar:**

- Parts of Speech
- Tenses
- Punctuation
- Active/passive
- Direct/Indirect

04. **Vocabulary:**

- Singular & Plural
- Gender
- Synonymous & Antonymous
- Spellings

05. **Translation: (Short Paragraphs)**

- English to Urdu
- Urdu to English

اسوہ کالج اسلام آباد

سلیبس اردو (انٹری ٹیسٹ جماعت ہشتم)

حصہ صرف + حصہ نحو

1- قواعد (گرامر)

2- محاورات و ضرب الامثال

3- واحد جمع / تذکیر و تانیث / متضاد، مترادف و غیرہ

4- مضمون

5- درخواست

مجوزہ درسی کتاب: قواعد و انشاء (پنجاب ٹیکسٹ بک بورڈ لاہور)

USWA COLLEGE ISLAMABAD

Entrance Test

Class: 8th

Subject: Mathematics

Syllabus

The students should know

- Basic concept of Set, kinds of set, operation on sets (like union, intersection etc) and related symbols ($\in, \notin, \cup, \cap, \subseteq, \emptyset$ etc.)
- Operations on integers (like addition, subtraction, division and multiplication) and related symbols ($\leq, \geq, =, \neq$ etc.)
- Additive and multiplicative inverses of integers.
- Laws of exponents.
- Concept of rational numbers.
- Addition, subtraction, division and multiplication of Polynomial values of algebraic expressions.
- Factorization of polynomials.
- How to use identities to factorize different polynomials
- How to find loss, profit, their percentage, average etc.
- How to find GST, property tax, zakat, ushr etc.
- Concept of linear equation and solution of linear equations.
- Ratio, continued ratio and proportion (direct and inverse).
- How to find square root of numbers, common fraction, mixed fraction and decimal fractions.
- Types of fraction, types of common and decimal fractions.
- Ascending and descending order of polynomials.
- How to find circumference, radius, diameter and area of circle.
- How to find the area and volume of cube, cuboid and cylinder.
- How to construct triangle, rectangle and parallelogram.
- How to construct different angles with the help of compass.
- Construction of equilateral rectangle:
 - i) when base is given ii) Altitude is given
- For Isosceles:
 - i) when base and base angles are given ii) vertex and vertex angle are given
 - iii) Altitude and base angle are given
- Fundamentals of Geometry.

NOTE: Students are advised to consult Punjab Text Book of Class VII for Entrance Test.

