

Science Notes

Physics | Chemistry | Biology | Key Concepts

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Topics Covered:

1. Physics & Newton's Laws
2. Chemistry Basics
3. Biology & Human Body
4. MCQ Practice

For: SSC | IBPS | UPSC | All Govt Exams

1. Physics — Basic Concepts

Motion & Laws

Newton's Laws of Motion form the foundation of classical mechanics. First Law (Inertia): A body at rest stays at rest, a body in motion stays in motion unless acted upon by an external force. Second Law: $F = ma$. Third Law: Every action has an equal and opposite reaction.

Q. What is Newton's Second Law?

Ans: $F = ma$ (Force = mass x acceleration)

Q. What is the SI unit of Force?

Ans: Newton (N)

Q. Who discovered Gravity?

Ans: Sir Isaac Newton (inspired by falling apple, 1687)

Q. What is the speed of light?

Ans: 3×10^8 m/s (approximately 3,00,000 km/s)

Q. What is Archimedes Principle?

Ans: A body immersed in a fluid experiences an upward buoyant force equal to the weight of fluid displaced

2. Chemistry — Key Concepts

Elements & Compounds

Matter is made of atoms. Elements are pure substances made of one type of atom. The Periodic Table has 118 elements. Metals are on the left, non-metals on the right, and metalloids in between.

Q. What is the chemical formula of water?

Ans: H_2O (2 Hydrogen + 1 Oxygen)

Q. What is the atomic number of Gold?

Ans: 79 (Symbol: Au, from Latin Aurum)

Q. What is pH of pure water?

Ans: 7 (neutral — below 7 = acidic, above 7 = basic/alkaline)

Q. Which gas is called laughing gas?

Ans: Nitrous Oxide (N_2O)

Q. What is the hardest natural substance?

Ans: Diamond (pure carbon, Mohs hardness = 10)

3. Biology — Key Concepts

Q. What is the basic unit of life?

Ans: Cell — discovered by Robert Hooke (1665)

Q. What is DNA?

Ans: Deoxyribonucleic Acid — carries genetic information; double helix structure discovered by Watson & Crick (1953)

Q. Which blood group is universal donor?

Ans: O negative (O-)

Q. Which blood group is universal recipient?

Ans: AB positive (AB+)

Q. What is the normal human body temperature?

Ans: 37 degrees C (98.6 degrees F)

Q. How many bones in adult human body?

Ans: 206 bones

Q. Which is the largest organ of the human body?

Ans: Skin

Q. Which is the largest internal organ?

Ans: Liver

4. MCQ Practice Set

Q. The unit of electric current is:

- (a) Volt
- (b) Ampere
- (c) Watt
- (d) Ohm

Answer: (b) Ampere

Q. Photosynthesis occurs in which part of plant?

- (a) Root
- (b) Stem
- (c) Leaf (Chloroplast)
- (d) Flower

Answer: (c) Leaf (Chloroplast)

Q. Which vitamin is produced by sunlight?

- (a) Vitamin A
- (b) Vitamin B
- (c) Vitamin C
- (d) Vitamin D

Answer: (d) Vitamin D

Q. What is the chemical name of common salt?

- (a) Sodium Carbonate
- (b) Sodium Chloride
- (c) Calcium Chloride
- (d) Potassium Chloride

Answer: (b) Sodium Chloride

Q. Sound cannot travel through:

- (a) Water
- (b) Air
- (c) Steel
- (d) Vacuum

Answer: (d) Vacuum