



# SCIENCE

2025  
Grade 9 & 10



- Q 8 : What type of bond is formed when electrons are shared between two atoms?
- A. Ionic bond      B. Covalent bond  
C. Metallic bond      D. Hydrogen bond
- Q 9 : Which part of the cell controls the cell's activities and contains the DNA?
- A. Nucleus      B. Cytoplasm  
C. Ribosome      D. Mitochondria
- Q 10 : What is the SI unit for measuring force?
- A. Meter      B. Kilogram  
C. Newton      D. Joule
- Q 11 : Which of the following is NOT a phase of matter?
- A. Gas      B. Plasma  
C. Liquid      D. Gravity
- Q 12 : Which of the following is an example of a non-metal?
- A. Iron      B. Copper  
C. Sulfur      D. Silver
- Q 13 : What is the process by which plants make their own food using sunlight?
- A. Respiration      B. Photosynthesis  
C. Fermentation      D. Digestion
- Q 14 : Which is the outermost planet in the solar system?
- A. Neptune      B. Uranus  
C. Mercury      D. Pluto
- Q 15 : Severe deficiency of Vitamin D results in \_\_\_\_\_.
- A. night blindness      B. rickets  
C. osteomalacia      D. scurvy

Q 16 : Milk Contains Water.

- A. 80%                      B. 70%  
C. 75%                      D. 90%

Q 17 : Very High Frequency (VHF) have \_\_\_\_\_ wavelengths?

- A. shortest                      B. longest  
C. shorter                      D. longer

Q 18 : For a fixed mass of gass at constant temperature, if we decrease volume, the pressure will \_\_\_\_\_?

- A. also decrease                      B. remains constant  
C. increase                      D. none of these

Q 19 : The lifespan of Red Blood Cells is \_\_\_\_\_ days?

- A. 120                      B. 60  
C. 240                      D. 180

Q 20 : The density of water is \_\_\_\_\_?

- A. 1.5 g/cm<sup>3</sup>                      B. 2 g/cm<sup>3</sup>  
C. 1 g/cm<sup>3</sup>                      D. none of these

Q 21 : The gas used in a refrigerator to cool water is\_\_\_\_\_?

- A. Ammonia                      B. Carbon dioxide  
C. Methane                      D. Nitrogen

Q 22 : The most abundant element in the universe is \_\_\_\_\_.

- A. Carbon Dioxide                      B. Hydrogen  
C. Oxygen                      D. Silicon

- Q 23 : The most abundant element in the Earth's crust is \_\_\_\_\_?
- A. Carbon Dioxide      B. Hydrogen  
C. Oxygen                D. Silicon
- Q 24 : Each day human body breathe in \_\_\_\_\_ liters of air.
- A. 10,000 to 15,000      B. 15,000 to 20,000  
C. 5,000 to 10,000      D. 20,000 to 25,000
- Q 25 : The most densest substance on the Earth is \_\_\_\_\_.
- A. Platinum                B. Copper  
C. Steel                      D. Osmium
- Q 26 : Which from the following is true for "Sound"?
- A. Sound cannot travel through a vacuum  
B. Sound cannot travel through liquids  
C. Sound cannot travel through gases  
D. Sound cannot travel through solids
- Q 27 : Instrument used for measuring very high temperature is \_\_\_\_\_?
- A. Xylometer                B. Pyroscope  
C. Pyrometer                D. Seismograph
- Q 28 : During winter in cold countries, the \_\_\_\_\_ is mixed to melt the ice on the icy roads.
- A. Carbon dioxide        B. Water  
C. Salt                        D. Chlorine
- Q 29 : In a very low temperature which from the following will freeze at last?
- A. Water in lake          B. Sea Water  
C. River Water              D. Canal water

Q 30 : The planet that moves round the Sun at the highest speed is?

- A. Venus
- B. Mars
- C. Mercury
- D. Jupiter

Q 31 : GPS is an abbreviation for?

- A. Global Positioning System
- B. Global Poles System
- C. Global PolySiliconium Store
- D. Global Position Structure

Q 32 : Oxidation is a chemical reaction involving the \_\_\_\_\_?

- A. Loss of Protons
- B. Loss of Electrons
- C. Gain of Electrons
- D. Gain of Protons

Q 33 : The natural fats and oils are composed of \_\_\_\_\_?

- A. Carbon, Hydrogen and Nitrogen
- B. Carbon, Oxygen and Nitrogen
- C. Carbon, Hydrogen and Oxygen
- D. Hydrogen, Oxygen and Nitrogen

Q 34 : Who is considered the founder of meteorology?

- A. Plato
- B. Einstein
- C. Newton
- D. Aristotle

Q 35 : \_\_\_\_\_ are called the powerhouses of the cell?

- A. Vesicles
- B. Mitochondria
- C. Lungs
- D. Liver

Q 36 : One of the countries through which equator passes is \_\_\_\_\_?

- A. Malta
- B. Kenya
- C. Pakistan
- D. Malaysia



Q 44 : Which gas was discovered on the sun about 151 years ago during total solar eclipse?

- A. Helium
- B. Hydrogen
- C. Nitrogen
- D. Flourine

Q 45 : Nearest galaxy to our milky way is \_\_\_\_\_?

- A. Whirlpool
- B. Messier 81
- C. Triangulum
- D. Andromeda

Q 46 : Which of the following are phagocytic cells?

- A. neutrophils, mast cells
- B. mast cells, macrophages
- C. mast cells, antibodies
- D. neutrophils, macrophages

Q 47 : Which of the following cells do not usually divide but can be induced to divide?

- A. liver cells
- B. red blood cells
- C. hair cells
- D. hair follicles

Q 48 : Which of the following does not belong to phylum Mollusca?

- A. Sea Hare
- B. Sea mica
- C. Sea lemon
- D. Sea feather

Q 49 : The process of cleaning sheared skin is called \_\_\_\_\_ .

- A. Rearing
- B. Scouring
- C. Shearing
- D. All of the above

Q 50 : The DNA fragments have sticky ends due to

- A. Endonuclease
- B. Unpaired bases
- C. Calcium ions
- D. Free methylation



Q 51 : Sulfur exists in two polymorphic forms \_\_\_\_\_ and \_\_\_\_\_

- A. rhombic and monoclinic      B. rhombic and triclinic  
C. hexagonal and triclinic      D. hexagonal and monoclinic

Q 52 : When the molecules of a substance are kept at the surface of a solid or a liquid, what is the name of the process?

- A. Absorption      B. Adsorption  
C. Sorption      D. Desorption

Q 53 : Which of the following is a sorption example?

- A. Sponge in water      B. Cotton dipped in ink  
C. Water on silica gel      D. Oxygen on the metal surface

Q 54 : When converting a disaccharide to monosaccharides, which bond is hydrolyzed?

- A. Disulfide bond      B. Glycosidic bond  
C. Phosphodiester bond      D. Hydrogen bond

Q 55 : Which of the following chemical classes does not belong to the vast group of carbohydrates?

- A. Polyhydroxy ketones      B. Polyhalo aldehydes  
C. Polyamino aldehydes      D. Polyhydroxy carboxylic acids

Q 56 : If we add all the 7 colors of rainbow (red, yellow, blue, green, orange, violet and indigo), the resultant color would be?

- A. White      B. Black  
C. Yellow      D. Dark Blue

Q 57 : Which from the following is NOT a Renewable Energy?

- A. Geothermal
- B. Solar
- C. Nuclear
- D. Bio-fuels

Q 58 : The wire used to make the filament of a light bulb is made of

- A. nichrome
- B. chromel
- C. tungsten
- D. fire-clay

Q 59 : The attractive force that binds protons and neutrons in nucleus of an atom is known as

- A. Coulomb force
- B. electromagnetic force
- C. nuclear force
- D. electromotive force

Q 60 : Human eye can view electromagnetic radiation with wavelengths from

\_\_\_\_\_ to \_\_\_\_\_ nano-meter.

- A. 200, 500
- B. 200, 600
- C. 400, 700
- D. 400, 800

Q 61 : Which of the following is an application of Newton's First Law of Motion?

- A. A car accelerates when the engine is started.
- B. A book remains at rest on a table.
- C. A satellite orbits the Earth.
- D. A person jumps from a moving train.

Q 62 : Which of the following devices uses the principle of electromagnetism?

- A. Radio
- B. Lever
- C. Spring Scale
- D. Wheelbarrow

Q 63 : What is the main application of Bernoulli's principle?

- A. Hydroelectric power generation
- B. Airplane flight Boiling water
- C. Boiling water
- D. Steam

Q 64 : Which of the following is an example of a chemical reaction that absorbs energy?

- A. Combustion of wood
- B. Freezing of water
- C. Photosynthesis
- D. Rusting of iron

Q 65 : Which law explains the expansion of gases when heated?

- A. Newton's Third Law
- B. Boyle's Law
- C. Charles's Law
- D. Archimedes' Principle

Q 66 : In which field is the concept of quantum mechanics applied?

- A. Classical mechanics
- B. Electromagnetism
- C. Modern electronics
- D. Fluid dynamics

Q 67 : The principle of conservation of mass is applied in:

- A. Chemical reactions
- B. Physical changes
- C. Nuclear reactions
- D. Both a and b

Q 68 : Which of the following is an application of Archimedes' Principle?

- A. The behavior of gases
- B. The working of a hydraulic lift
- C. The floating of ships
- D. The operation of a barometer

Q 69 : Which of the following is an application of the laws of thermodynamics?

- A. Heating a metal rod
- B. Operation of a refrigerator
- C. Water flowing down a river
- D. Moving a car uphill

Q 70 : The property that determines how much charge a capacitor can store is called

- A. capacitance
- B. resistance
- C. electric charge
- D. dipole moment

Q 71 : Sun revolves around milky way in about \_\_\_\_\_ million years.

- A. 225
- B. 230
- C. 250
- D. 245

Q 72 : How long does the earth take to cover 1° longitude?

- A. 4 Minutes
- B. 5 Minutes
- C. 3 Minutes
- D. 2 Minutes

Q 73 : The major ingredient of leather is\_\_\_\_\_?

- A. Nucleic acid
- B. Polymer
- C. Collagen
- D. Carbon, Oxygen and Nitrogen

Q 74 : Which of the following medications is not classified according to the pharmacological effect criteria?

- A. Analgesics
- B. Antiseptics
- C. Antipyretics
- D. Antiseptics

Q 75 : Drugs that prevent an enzyme's binding site from a substrate are known as \_\_\_\_\_.

- A. messengers
- B. inhibitors
- C. poisons
- D. receptors

Q 76 : Which of the following chemicals aids in the regulation of stomach acid production?

- A. Ranitidine                      B. Cimetidine  
C. Histamine                      D. Omeprazole

Q 77 : For which of the following is the Hinsberg approach used?

- A. Preparation of primary amines  
B. Separation of amine mixtures  
C. Preparation of tertiary amines  
D. Preparation of secondary amines

Q 78 : Which test can tell the difference between p-chloroaniline and anilinium hydrochloride?

- A. Sandmeyer reaction                      B. Carbylamine test  
C. AgNO<sub>3</sub>                                      D. NaHCO<sub>3</sub>

Q 79 : Which of these substances has a lower melting point than amine?

- A. Alcohol                                      B. Ether  
C. Carboxylic acid                              D. Phosphine

Q 80 : What is 3-Bromopropene's common name?

- A. Allyl bromide                              B. Vinyl bromide  
C. Tert-Butyl bromide                              D. Propylidene bromide

Q 81 : Which of the following is the right name for the compound H<sub>3</sub>C-CHCl<sub>2</sub>?

- A. 1,2-Dichloroethane                              B. Ethylene dichloride  
C. Ethylidene chloride                              D. Vic-dichloride

Q 82 : What is the catalyst in the chloroalkane reaction of a primary alcohol with HCl?

- A. red phosphorous
- B. concentrated H<sub>2</sub>SO<sub>4</sub>
- C. anhydrous ZnCl<sub>2</sub>
- D. pyridine

Q 83 : Which of the following statements about the interaction between C<sub>2</sub>H<sub>4</sub> and Cl<sub>2</sub> in CCl<sub>4</sub> is incorrect?

- A. It results in the formation of a vicinal dihalide
- B. It results in the discharge of a reddish-brown colour
- C. It results in the formation of a colourless compound
- D. It results in the breaking of the C-C double bond

Q 84 : A ball is thrown vertically upward with a speed of 20 m/s. What will be its velocity when it reaches the maximum height?

- A. 0 m/s
- B. 10 m/s
- C. 20 m/s
- D. 40 m/s

Q 85 : A body moves with a constant velocity of 5 m/s in a straight line. The net force acting on the body is:

- A. 0 N
- B. 5 N
- C. 10 N
- D. 25 N

Q 86 : If the temperature of an ideal gas is doubled, what happens to its pressure at constant volume?

- A. It remains the same
- B. It doubles
- C. It increases four times
- D. It half

Q 87 : The energy stored in a capacitor is given by  $E = \frac{1}{2} C V^2$ . If both the capacitance and the voltage are doubled, what happens to the energy stored?

- A. It remains the same
- B. It doubles
- C. It increases by a factor of 4
- D. It increases by a factor of 8

Q 88 : A 2.0-kg object is moving with a velocity of 3.0 m/s. What is its kinetic energy?

- A. 9.0 J
- B. 18.0 J
- C. 27.0 J
- D. 36.0 J

Q 89 : In a circuit, a current of 2 A flows through a resistance of  $5 \Omega$ . What is the power dissipated?

- A. 2 W
- B. 5 W
- C. 10 W
- D. 20 W

Q 90 : A sound wave has a frequency of 1000 Hz. If the speed of sound is 340 m/s, what is the wavelength of the sound wave?

- A. 0.34 m
- B. 3.4 m
- C. 34 m
- D. 340 m

Q 91 : Which of the following compounds would have the lowest boiling point?

- A. CH<sub>3</sub>OH
- B. C<sub>2</sub>H<sub>5</sub>OH
- C. CH<sub>4</sub>
- D. C<sub>3</sub>H<sub>7</sub>OH

Q 92 : What is the electronic configuration of the Mn<sup>2+</sup> ion?

- A. [Ar] 3d<sup>6</sup>
- B. [Ar] 3d<sup>5</sup>
- C. [Ar] 3d<sup>7</sup>
- D. [Ar] 3d<sup>4</sup>

Q 93 : The bond dissociation enthalpy of O<sub>2</sub> is 498 kJ/mol. What is the bond dissociation enthalpy of O<sub>3</sub>?

- A. 502 kJ/mol
- B. 497 kJ/mol
- C. 800 kJ/mol
- D. 250 kJ/mol

Q 94 : Which of the following ions does not exhibit color in an aqueous solution?

- A.  $\text{Cu}^{2+}$                       B.  $\text{Fe}^{2+}$   
C.  $\text{Zn}^{2+}$                       D.  $\text{Mn}^{2+}$

Q 95 : Which of the following is the strongest acid in water?

- A. HF                              B. HCl  
C.  $\text{H}_2\text{SO}_4$                       D.  $\text{HNO}_3$

Q 96 : Which of the following will have the highest lattice energy?

- A. NaCl    B. KCl  
C. CaO    D. MgO

Q 97 : The value of the equilibrium constant,  $K_c$ , for the following reaction is  $1.0 \times 10^{-6}$ . What is the value of the reaction quotient  $Q_c$  when the concentration of the products is 0.1 M and the concentration of the reactants is 1.0 M?

- A. 0.1                              B. 10  
C.  $10^{-6}$                         D. 106

Q 98 : Which of the following is NOT a function of the smooth endoplasmic reticulum (SER)?

- A. Detoxification of harmful substances  
B. Synthesis of steroid hormones  
C. Protein synthesis  
D. Storage of calcium ions

Q 99 : In which phase of the cell cycle does DNA replication occur?

- A. G1 phase                      B. S phase  
C. G2 phase                      D. M phase



Q 100 : Which of the following organisms is capable of nitrogen fixation?

- A. E. coli
- B. Rhizobium
- C. Streptococcus
- D. Saccharomyces cerevisiae

Q 101 : The process of crossing over occurs during which stage of meiosis?

- A. Prophase I
- B. Metaphase I
- C. Anaphase II
- D. Telophase II

Q 102 : Which of the following best describes the role of mitochondria in a cell?

- A. Protein synthesis
- B. Energy production via oxidative phosphorylation
- C. DNA replication
- D. detoxification of drugs and alcohol

Q 103 : In a human, the process of erythropoiesis (formation of red blood cells) primarily occurs in:

- A. Liver
- B. Bone marrow
- C. Spleen
- D. Lymph nodes

Q 104 : Which of the following hormones is responsible for the maturation of follicles in the ovary?

- A. Prolactin
- B. Luteinizing hormone (LH)
- C. Follicle-stimulating hormone (FSH)
- D. Estrogen

Q 105 : Which of the following structures in the human body is NOT composed of epithelial tissue?

- A. Skin
- B. Lining of blood vessels
- C. Lining of the stomach
- D. Bone

Q 106 : In the Calvin cycle, which molecule is fixed during the first step of the process?

- A. Glucose
- B. Oxygen
- C. Carbon dioxide
- D. Water

Q 107 : The ABO blood group system is an example of which type of genetic inheritance?

- A. Codominance
- B. Incomplete dominance
- C. Multiple alleles
- D. Epistasis

Q 108 : The strongest part(s) of a magnet is/are \_\_\_\_\_?

- A. South pole
- B. North pole
- C. Median of north and south pole
- D. North and south pole

Q 109 : Which Planet has purple rocks according to NASA ?

- A. Neptune
- B. Earth
- C. Mars
- D. Jupiter

Q 110 : Sun is moving around the centre of the galaxy at a velocity of \_\_\_\_\_ km/s?

- A. 215
- B. 205
- C. 210
- D. 220

Q 111 : A hypothesis is best described as:

- A. A proven scientific fact
- B. A testable explanation for an observation
- C. The final conclusion of an experiment
- D. The conclusion drawn after data collection

Q 112 : Which of the following is a characteristic of a good scientific experiment?

- A. Only one variable is tested at a time
- B. It is impossible to replicate the experiment
- C. Results are always predictable
- D. The experiment has no control group

Q 113 : Which of the following is a characteristic of transition metals?

- A. High ionization energies
- B. Form colored compounds
- C. Non-metallic in nature
- D. Show no variable oxidation states

Q 114 : Which of the following metals does not form a colored ion in aqueous solution?

- A. Cu
- B. Fe
- C. Cr
- D. Ca

Q 115 : Which of the following statements is true about isotopes?

- A. They have the same number of protons but different numbers of neutrons.
- B. They have the same atomic number but different mass numbers.
- C. They have different atomic numbers.
- D. They are chemically identical.

Q 116 : Which of the following is an example of a covalent compound?

- A. NaCl
- B. CaO
- C. CO<sub>2</sub>
- D. K<sub>2</sub>SO<sub>4</sub>

Q 117 : Which of the following is not an allotrope of carbon?

- A. Diamond
- B. Graphite
- C. Fullerenes
- D. Silicon

Q 118 : The number of moles of NaCl in 58.5 grams is:

- A. 1 mole    B. 2 mole    C. 0.5 mole    D. 3 mole

Q 119 : Which of the following compounds is an example of a metal oxide that reacts with water to form an alkali?

- A. CO<sub>2</sub>    B. Na<sub>2</sub>O  
C. SO<sub>3</sub>    D. Cl<sub>2</sub>O

Q 120 : What is the oxidation state of sulfur in Na<sub>2</sub>SO<sub>4</sub>?

- A. (+2)    B. (+4)  
C. (+6)    D. (-2)

Q 121 : What is the electron configuration of a neutral nitrogen atom (atomic number 7)?

- A. 1s<sup>2</sup> 2s<sup>2</sup> 2p<sup>3</sup>    B. 1s<sup>2</sup> 2s<sup>2</sup> 2p<sup>2</sup>  
C. 1s<sup>2</sup> 2s<sup>2</sup> 2p<sup>4</sup>    D. 1s<sup>2</sup> 2s<sup>1</sup> 2p<sup>6</sup>

Q 122 : Which of the following has the highest electronegativity?

- A. Fluorine    B. Oxygen  
C. Nitrogen    D. Chlorine

Q 123 : Which of the following gases is most soluble in water?

- A. Nitrogen    B. Oxygen  
C. Carbon dioxide    D. Hydrogen

Q 124 : The principle quantum number (n) is related to the:

- A. Shape of the orbital    B. Orientation of the orbital  
C. Energy of the electron    D. Number of electrons in the orbital

Q 125 : What is the IUPAC name of the compound with the formula  $C_2H_6$ ?

- A. Methane
- B. Ethane
- C. Propane
- D. Butane

Q 126 : Which of the following is an example of a codominant trait?

- A. Blood type AB
- B. Red-green color blindness
- C. Cystic fibrosis
- D. Sickle cell anemia

Q 127 : The fluid mosaic model describes the structure of which of the following?

- A. Ribosome
- B. Nucleus
- C. Plasma membrane
- D. Mitochondrion

Q 128 : Which of the following is the primary source of energy for the processes of the cell?

- A. ATP
- B. DNA
- C. NADH
- D. Glucose

Q 129 : What does the term “autotroph” refer to?

- A. Organisms that must consume other organisms for food
- B. Organisms that produce their own food
- C. Organisms that lack chlorophyll
- D. Organisms that break down organic matter

Q 130 : Which of the following is an example of passive transport?

- A. Sodium-potassium pump
- B. Endocytosis
- C. Facilitated diffusion
- D. Active transport

Q 131 : In a DNA molecule, what type of bond holds the two strands together?

- A. Ionic bond
- B. Hydrogen bond
- C. Covalent bond
- D. Peptide bond

Q 132 : Which process is responsible for the formation of mRNA from DNA?

- A. Transcription
- B. Replication
- C. Translation
- D. Mutation

Q 133 : Which of the following is the primary function of ribosomes?

- A. Synthesize RNA
- B. Synthesize proteins
- C. Store genetic information
- D. Provide cellular energy

Q 134 : The law of independent assortment was proposed by:

- A. Gregor Mendel
- B. Charles Darwin
- C. Thomas Hunt Morgan
- D. Alfred Wallace

Q 135 : The process of crossing over occurs during which phase of meiosis?

- A. Prophase I
- B. Metaphase II
- C. Anaphase I
- D. Telophase II

Q 136 : What does a gene mutation lead to?

- A. A change in the cell's shape
- B. A change in the cell membrane structure
- C. A change in the amino acid sequence of a protein
- D. A change in the number of chromosomes

Q 137 : Which of the following is a feature of meiosis, but not mitosis?

- A. Two divisions of the nucleus
- B. Chromosome number is halved
- C. Daughter cells are identical
- D. Happens in somatic cells

Q 138 : A car accelerates uniformly from 0 to 20 m/s in 10 seconds. What is the average velocity?

- A. 10 m/s
- B. 20 m/s
- C. 15 m/s
- D. 5 m/s

Q 139 : Two objects are dropped from a height. One is 2 kg and the other is 5 kg.

Ignoring air resistance, which object hits the ground first?

- A. The 2 kg object
- B. The 5 kg object
- C. Both objects hit simultaneously
- D. Neither

Q 140 : Which of the following statements is true for an adiabatic process?

- A. Heat is transferred to the system
- B. No heat is transferred to or from the system
- C. The internal energy remains constant
- D. The temperature of the system remains constant

Q 141 : Which of the following processes is an example of an isothermal process?

- A. Compression of a gas at constant temperature
- B. Expansion of a gas at constant pressure
- C. Heating of a gas at constant volume
- D. All of the above

Q 142 : The work done in an isobaric process is:

- A. Zero    B.  $P\Delta V$     C.  $PV$     D.  $\Delta T$

Q 143 : The magnetic force on a moving charged particle is given by:

- A.  $F=qE$     B.  $F=qB$   
C.  $F=qvB\sin\theta$     D.  $F=qvE$

Q 144 : Which of the following materials is used as the core in a transformer?

- A. Copper    B. Iron    C. Aluminium    D. Lead

Q 145 : In an alternating current circuit, the power factor is:

- A. The ratio of energy stored to energy dissipated  
B. The cosine of the phase angle between voltage and current  
C. Always unity  
D. Always zero

Q 146 : In a parallel plate capacitor, if the plate area is doubled while the distance between the plates is halved, the capacitance will:

- A. Remain the same    B. Double  
C. Quadruple    D. Increase by a factor of 8

Q 147 : Which of the following phenomena cannot be explained by the wave theory of light?

- A. Interference    B. Diffraction  
C. Polarization    D. Photoelectric effect

Q 148 : The energy of a photon is directly proportional to:

- A. Its velocity    B. Its frequency  
C. Its wavelength    D. The square of its wavelength



Q 149 : In the Bohr model of the atom, the electron moves in:

- A. Circular orbits with fixed radii
- B. Elliptical orbits
- C. Random paths
- D. Linear motion

Q 150 : Which of the following gases will diffuse the fastest?

- A. Nitrogen
- B. Oxygen
- C. Carbon dioxide
- D. Hydrogen

Q 151 : What is the shape of the water (H<sub>2</sub>O) molecule?

- A. Linear
- B. Trigonal planar
- C. Bent
- D. Tetrahedral

Q 152 : Which of the following is true about ionic compounds?

- A. They are poor conductors of electricity in the solid state.
- B. They have low melting and boiling points.
- C. They are formed by the sharing of electrons.
- D. They are typically liquids at room temperature.

Q 153 : Which of the following substances is an electrolyte?

- A. NaCl
- B. C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>
- C. CH<sub>3</sub>OH
- D. O<sub>2</sub>

Q 154 : What is the primary reason that the noble gases are chemically inert?

- A. They have a full outer electron shell.
- B. They have no electrons.
- C. They have a low atomic mass.
- D. They are metals.

Q 155 : Which of the following is an example of a disproportionation reaction?

- A.  $2\text{Na} + \text{Cl}_2 \rightarrow 2\text{NaCl}$       B.  $2\text{H}_2\text{O} \rightarrow 2\text{H}_2 + \text{O}_2$   
C.  $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$       D.  $2\text{Na} + 2\text{H}_2\text{O} \rightarrow 2\text{NaOH} + \text{H}_2$

Q 156 : Which of the following is not a type of chemical bond?

- A. Ionic      B. Covalent  
C. Metallic      D. Gravitational

Q 157 : Which part of the cell cycle is responsible for DNA replication?

- A. G1 phase      B. S phase  
C. G2 phase      D. M phase

Q 158 : What is the primary function of the Golgi apparatus?

- A. Protein synthesis      B. Lipid synthesis  
C. Modification and packaging of proteins  
D. Cellular respiration

Q 159 : Which structure is responsible for the regulation of substances entering and exiting the cell?

- A. Ribosome      B. Plasma membrane  
C. Nucleus      D. Mitochondria

Q 160 : What type of bond holds the nitrogenous bases together in a DNA molecule?

- A. Hydrogen bond      B. Covalent bond  
C. Ionic bond      D. Disulfide bond

Q 161 : Which of the following is a characteristic of prokaryotic cells?

- A. Membrane-bound organelles      B. A defined nucleus  
C. Circular DNA      D. Linear chromosomes

Q 162 : In which part of the plant cell does photosynthesis take place?

- A. Mitochondria
- B. Cytoplasm
- C. Chloroplast
- D. Nucleus

Q 163 : What is the function of the smooth endoplasmic reticulum?

- A. Protein synthesis
- B. Lipid synthesis
- C. Transport of proteins
- D. Storage of genetic material

Q 164 : Which of the following is an example of a vestigial structure?

- A. Tailbone in humans
- B. Wings in birds
- C. Eyes in cave-dwelling fish
- D. Gills in amphibians

Q 165 : Which of the following is an example of aneuploidy?

- A. Down syndrome
- B. Down syndrome
- C. Huntington's disease
- D. Cystic fibrosis

Q 166 : The exchange of gases in the lungs occurs in the:

- A. Bronchi
- B. Trachea
- C. Alveoli
- D. Pharynx

Q 167 : Which of the following is an example of a recessive genetic disorder?

- A. Huntington's disease
- B. Sickle cell anemia
- C. Hemophilia
- D. Cystic fibrosis

Q 168 : The immune system's response to a foreign pathogen is an example of:

- A. Passive immunity
- B. Active immunity
- C. Non-specific immunity
- D. Innate immunity

Q 169 : Which of the following is a property of a photon?

- A. Rest mass
- B. Electric charge
- C. Both energy and momentum
- D. Both rest mass and electric charge

Q 170 : Which of the following is true about the speed of sound in air?

- A. It increases with temperature
- B. It decreases with temperature
- C. It is independent of temperature
- D. It increases with altitude

Q 171 : Which of the following metals is known for being the most reactive?

- A. Gold
- B. Iron
- C. Sodium
- D. Copper

Q 172 : Which of the following acids is present in vinegar?

- A. Sulfuric acid
- B. Acetic acid
- C. Hydrochloric acid
- D. Citric acid

Q 173 : Which structure controls the activities of a cell?

- A. Mitochondria
- B. Nucleus
- C. Ribosome
- D. Endoplasmic reticulum

Q 174 : What is the primary function of the large intestine in humans?

- A. Absorption of nutrients
- B. Digestion of food
- C. Absorption of water
- D. Secretion of bile

Q 175 : Which of the following is not a type of connective tissue?

- A. Bone
- B. Cartilage
- C. Blood
- D. Epithelium

Q 176 : What is the primary cause of ocean currents?

- A. Earth's rotation
- B. Tidal forces
- C. Wind patterns
- D. Solar radiation

Q 177 : Which layer of the Earth is composed mainly of solid iron and nickel?

- A. Crust
- B. Mantle
- C. Outer core
- D. Inner Core

Q 178 : Which type of rock is formed by the cooling and solidification of magma?

- A. Sedimentary rock
- B. Igneous rock
- C. Metamorphic rock
- D. Organic rock

Q 179 : What type of boundary is formed when two tectonic plates move towards each other?

- A. Divergent boundary
- B. Convergent boundary
- C. Transform boundary
- D. Fault boundary

Q 180 : Which of the following is responsible for the phases of the Moon?

- A. The Earth's shadow
- B. The Moon's rotation
- C. The Moon's orbit around Earth
- D. The Sun's rotation

Q 181 : Who is known as the father of modern physics?

- A. Isaac Newton
- B. Albert Einstein
- C. Galileo Galilei
- D. Nikola Tesla

Q 182 : Which of these actions would most effectively reduce the environmental impact of plastic pollution?

- A. Recycling more plastic
- B. Using plastic bags for shopping
- C. Banning plastic altogether
- D. Reducing the use of single-use plastics

Q 183 : Which of the following is NOT an effect of deforestation?

- A. Loss of biodiversity
- B. Decreased carbon dioxide absorption
- C. Increased soil fertility
- D. Disruption of water cycles

Q 184 : Which of the following is an example of a circular economy principle?

- A. Throwing away electronic devices when they break
- B. Recycling materials to create new products
- C. Creating one-use plastic items
- D. Mining for raw materials without recycling

Q 185 : What is the main source of water pollution in many developing countries?

- A. Industrial waste
- B. Plastic waste
- C. Agricultural runoff
- D. Oil spills

Q 186 : Which of these is an example of an invertebrate?

- A. Fish
- B. Whale
- C. Earthworm
- D. Shark

Q 187 : Which of the following animals is known for having an exoskeleton?

- A. Dog
- B. Fish
- C. Frog
- D. Insect

Q 188 : Which of these animals undergoes metamorphosis?

- A. Frog
- B. Snake
- C. Dolphin
- D. Kangaroo

Q 189 : Which part of the plant is responsible for the production of seeds?

- A. Stem    B. Root    C. Leaf    D. Flower

Q 190 : Which of the following is the process by which water evaporates from the plant surface?

- A. Transpiration    B. Germination  
C. Photosynthesis    D. Respiration

Q 191 : Which of the following is a vascular tissue in plants?

- A. Epidermis    B. Xylem  
C. Chloroplast    D. Cuticle

Q 192 : What is the function of the phloem in plants?

- A. Transport of water and minerals    B. Transport of food  
C. Photosynthesis    D. Water storage

Q 193 : A person who is seated in front of a fire will receive heat by

- A. Conduction    B. Convection  
C. Radiation    D. None of these

Q 194 : What is the approximate maximum temperature that the human skin can endure without getting blisters?

- A. 40°C    B. 60°C    C. 80°C    D. 100°C

Q 195 : Lepidopterology is a branch of biology, which deals with the following?

- A. Ferns Lipids and    B. animals in stagnant waters  
C. Fats    D. Moths & Butterflies

Q 196 : The correct group of animals that suffer from the “Foot & Mouth ” disease is as follows:

- A. Only Cattle
- B. Cattle & Sheeps
- C. Cattle, Sheeps and Pigs
- D. Cattle and Pigs

Q 197 : Plants which are adapted to grow in soils containing high concentration of salt are known as:

- A. Xerophytes
- B. Mesophytes
- C. Halophytes
- D. Thallophytes

Q 198 : Which of the following tissue provides strength to the plant?

- A. Intercalary
- B. Parenchyma
- C. Collenchyma
- D. Sclerenchyma



# Answers Key

|        |   |        |   |        |   |         |   |         |   |
|--------|---|--------|---|--------|---|---------|---|---------|---|
| Q 1 :  | B | Q 28 : | C | Q 55 : | A | Q 82 :  | C | Q 109 : | C |
| Q 2 :  | D | Q 29 : | B | Q 56 : | A | Q 83 :  | B | Q 110 : | D |
| Q 3 :  | C | Q 30 : | C | Q 57 : | C | Q 84 :  | A | Q 111 : | B |
| Q 4 :  | A | Q 31 : | A | Q 58 : | D | Q 85 :  | A | Q 112 : | A |
| Q 5 :  | C | Q 32 : | B | Q 59 : | C | Q 86 :  | B | Q 113 : | B |
| Q 6 :  | C | Q 33 : | C | Q 60 : | C | Q 87 :  | C | Q 114 : | D |
| Q 7 :  | B | Q 34 : | D | Q 61 : | B | Q 88 :  | B | Q 115 : | A |
| Q 8 :  | B | Q 35 : | B | Q 62 : | A | Q 89 :  | C | Q 116 : | C |
| Q 9 :  | A | Q 36 : | B | Q 63 : | B | Q 90 :  | B | Q 117 : | D |
| Q 10 : | C | Q 37 : | C | Q 64 : | C | Q 91 :  | C | Q 118 : | A |
| Q 11 : | D | Q 38 : | B | Q 65 : | C | Q 92 :  | A | Q 119 : | B |
| Q 12 : | C | Q 39 : | A | Q 66 : | C | Q 93 :  | C | Q 120 : | C |
| Q 13 : | B | Q 40 : | B | Q 67 : | A | Q 94 :  | C | Q 121 : | A |
| Q 14 : | A | Q 41 : | D | Q 68 : | C | Q 95 :  | C | Q 122 : | A |
| Q 15 : | B | Q 42 : | D | Q 69 : | B | Q 96 :  | D | Q 123 : | C |
| Q 16 : | A | Q 43 : | D | Q 70 : | A | Q 97 :  | B | Q 124 : | C |
| Q 17 : | C | Q 44 : | A | Q 71 : | B | Q 98 :  | C | Q 125 : | B |
| Q 18 : | C | Q 45 : | D | Q 72 : | A | Q 99 :  | B | Q 126 : | A |
| Q 19 : | A | Q 46 : | D | Q 73 : | C | Q 100 : | B | Q 127 : | C |
| Q 20 : | C | Q 47 : | A | Q 74 : | D | Q 101 : | A | Q 128 : | A |
| Q 21 : | A | Q 48 : | D | Q 75 : | B | Q 102 : | B | Q 129 : | B |
| Q 22 : | B | Q 49 : | B | Q 76 : | C | Q 103 : | B | Q 130 : | C |
| Q 23 : | C | Q 50 : | B | Q 77 : | B | Q 104 : | C | Q 131 : | B |
| Q 24 : | B | Q 51 : | A | Q 78 : | D | Q 105 : | D | Q 132 : | A |
| Q 25 : | D | Q 52 : | B | Q 79 : | D | Q 106 : | C | Q 133 : | B |
| Q 26 : | A | Q 53 : | B | Q 80 : | A | Q 107 : | C | Q 134 : | A |
| Q 27 : | C | Q 54 : | B | Q 81 : | C | Q 108 : | D | Q 135 : | A |

|         |   |         |   |         |   |
|---------|---|---------|---|---------|---|
| Q 136 : | C | Q 165 : | A | Q 194 : | C |
| Q 137 : | B | Q 166 : | C | Q 195 : | D |
| Q 138 : | C | Q 167 : | D | Q 196 : | C |
| Q 139 : | C | Q 168 : | B | Q 197 : | C |
| Q 140 : | B | Q 169 : | C | Q 198 : | D |
| Q 141 : | C | Q 170 : | A |         |   |
| Q 142 : | B | Q 171 : | C |         |   |
| Q 143 : | C | Q 172 : | B |         |   |
| Q 144 : | B | Q 173 : | B |         |   |
| Q 145 : | B | Q 174 : | C |         |   |
| Q 146 : | C | Q 175 : | D |         |   |
| Q 147 : | D | Q 176 : | C |         |   |
| Q 148 : | B | Q 177 : | D |         |   |
| Q 149 : | A | Q 178 : | B |         |   |
| Q 150 : | D | Q 179 : | B |         |   |
| Q 151 : | C | Q 180 : | C |         |   |
| Q 152 : | A | Q 181 : | B |         |   |
| Q 153 : | A | Q 182 : | D |         |   |
| Q 154 : | A | Q 183 : | C |         |   |
| Q 155 : | B | Q 184 : | B |         |   |
| Q 156 : | D | Q 185 : | C |         |   |
| Q 157 : | B | Q 186 : | C |         |   |
| Q 158 : | C | Q 187 : | D |         |   |
| Q 159 : | B | Q 188 : | A |         |   |
| Q 160 : | A | Q 189 : | D |         |   |
| Q 161 : | C | Q 190 : | A |         |   |
| Q 162 : | C | Q 191 : | B |         |   |
| Q 163 : | B | Q 192 : | B |         |   |
| Q 164 : | A | Q 193 : | C |         |   |

**TSD - Head Office: July Building, Dama  
Street, Muscat, Oman.  
Contact No. +968 22093031, Official:  
+968 92230204,  
[www.talentandskillsdevelopment.com](http://www.talentandskillsdevelopment.com)**



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[www.talentandskillsdevelopment.com](http://www.talentandskillsdevelopment.com)**

