**Q1) Which of the following is not a physical change?**

a) Melting of ice

b) Rusting of iron

c) Boiling of water

d) Cutting of paper

Correct Answer: Option (b)

Explanation: Physical changes are those changes in matter that do not alter the chemical composition of the substance. Options (a), (c), and (d) are examples of physical changes, while option (b) is a chemical change, as it involves the formation of a new substance (iron oxide) with different properties.

Thus, the correct answer is option (b).

Difficulty Level- Easy

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q2) Answer the following question with reference to the audio**

[**https://drive.google.com/file/d/1t4HbI7xswieeo-hyIRY8vQGgD5fCrZGe/view?usp=share\_link**](https://drive.google.com/file/d/1t4HbI7xswieeo-hyIRY8vQGgD5fCrZGe/view?usp=share_link)

**TYPE: Audio**

**Which state of matter has a fixed volume but no fixed shape?**

a) Solid

b) Liquid

c) Gas

d) Plasma

Correct Answer: Option (b)

Explanation: Liquids have a fixed volume, but no fixed shape. They take on the shape of the container they are poured into. Solids have both a fixed volume and a fixed shape, while gases have neither a fixed volume nor a fixed shape.

Thus, the correct answer is option (b).

Difficulty Level- Easy

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q3) The process of conversion of a solid directly into vapour without melting is called:**

a) Sublimation

b) Evaporation

c) Condensation

d) Melting

Correct Answer: Option (a)

Explanation: Sublimation is the process in which a solid directly changes into its gaseous state without going through the liquid phase. This is a physical change that occurs under specific conditions of temperature and pressure.

Thus, the correct answer is option (a).

Difficulty Level- Easy

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q4) Which of the following is not a physical property of matter?**

a) Density

b) Conductivity

c) Flammability

d) Solubility

Correct Answer: Option (c)

Explanation: Physical properties are those properties that can be observed or measured without changing the identity of the substance. Density, conductivity, and solubility are physical properties, while flammability is a chemical property, as it describes the ability of a substance to undergo a chemical reaction (combustion) with oxygen.

Thus, the correct answer is option (c).

Difficulty Level- Easy

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q5) What is the SI unit of temperature?**

a) Kelvin

b) Celsius

c) Fahrenheit

d) Rankine

Correct Answer: Option (a)

Explanation: The SI unit of temperature is Kelvin (K). Celsius (°C) and Fahrenheit (°F) are also common temperature scales, but they are not SI units. Rankine (°R) is another temperature scale, but it is not commonly used.

Thus, the correct answer is option (a).

Difficulty Level- Easy

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q6) What is the chemical symbol for gold?**

a) Au

b) Ag

c) Fe

d) Cu

Correct Answer: Option (a)

Explanation: The chemical symbol for gold is Au, which comes from the Latin word aurum, meaning "shining dawn". Ag is the symbol for silver, Fe is the symbol for iron, and Cu is the symbol for copper.

Thus, the correct answer is option (a).

Difficulty Level- Easy

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q7) Which of the following is an example of a homogeneous mixture?**

a) Soil

b) Sand and water

c) Milk

d) Oil and vinegar

Correct Answer: Option (c)

Explanation: A homogeneous mixture is one in which the components are uniformly distributed throughout the mixture and have no visible boundaries or phases. Milk is an example of a homogeneous mixture, as it is composed of water, fat, protein, and other substances that are distributed evenly throughout the mixture. Soil, sand and water, and oil and vinegar are examples of heterogeneous mixtures, as they have visible boundaries or phases.

Thus, the correct answer is option (c).

Difficulty Level- Easy

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q8) Answer the following question with reference to the audio**

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**TYPE: Audio**

**What is the formula for water?**

a) HCl

b) CO2

c) H2SO4

d) H2O

Correct Answer: Option (d)

Explanation: The formula for water is H2O, which means that it is composed of two hydrogen atoms and one oxygen atom. HCl is the formula for hydrochloric acid, CO2 is the formula for carbon dioxide, and H2SO4 is the formula for sulphuric acid.

Thus, the correct answer is option (d).

Difficulty Level- Easy

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q9) What is the difference between an element and a compound?**

a) An element is composed of two or more different atoms, while a compound is composed of only one type of atom.

b) An element is a pure substance that cannot be broken down into simpler substances by chemical means, while a compound is composed of two or more different elements in a fixed ratio.

c) An element is a homogeneous mixture of two or more substances, while a compound is a heterogeneous mixture of two or more substances.

d) An element is a substance that has a definite shape and volume, while a compound is a substance that has a definite volume but no definite shape.

Correct Answer: Option (b)

Explanation: An element is a pure substance that consists of only one type of atom. It cannot be broken down into simpler substances by chemical means. A compound, on the other hand, is a pure substance that consists of two or more different elements in a fixed ratio. It can be broken down into its constituent elements by chemical means.

Thus, the correct answer is option (b).

Difficulty Level- medium.

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q10) What is the difference between a physical change and a chemical change?**

a) A physical change involves a change in the chemical composition of a substance, while a chemical change involves a change in the physical properties of a substance.

b) A physical change involves a change in the state or appearance of a substance, while a chemical change involves the formation of a new substance.

c) A physical change is irreversible, while a chemical change is reversible.

d) A physical change is always accompanied by a change in temperature, while a chemical change is not.

Correct Answer: Option (a)

Explanation: A physical change is a change in which the chemical composition of the substance remains the same. It may involve a change in the state or appearance of the substance, but the chemical identity of the substance remains unchanged. A chemical change, on the other hand, involves the formation of a new substance with different properties. It may involve a change in the physical properties of the substance, such as colour or odour, but the chemical composition of the substance is altered.

Thus, the correct answer is option (a).

Difficulty Level- medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q11) What is the relationship between temperature and kinetic energy of particles in matter?**

a) Directly proportional

b) Inversely proportional

c) No relationship

d) Random

Correct Answer: Option (a)

Explanation: The kinetic energy of particles in matter is directly proportional to temperature. This means that as the temperature of matter increases, the particles gain more kinetic energy and move faster. This relationship is described by the kinetic theory of matter.

Thus, the correct answer is option (a).

Difficulty Level- medium

Bloom’s Taxonomy- Evaulate

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q12) Answer the following question with reference to the audio**

[**https://drive.google.com/file/d/1VuMC3yxVYuRdPmVVWIRbY2YCbJ-e3IEV/view?usp=share\_link**](https://drive.google.com/file/d/1VuMC3yxVYuRdPmVVWIRbY2YCbJ-e3IEV/view?usp=share_link)

**TYPE: Audio**

**Which of the following statements is true about the states of matter?**

a) The particles in a solid are tightly packed together and have a fixed shape and volume.

b) The particles in a liquid have a fixed shape and volume.

c) The particles in a gas are tightly packed together and have a fixed shape and volume.

d) The particles in plasma have a fixed shape and volume.

Correct Answer: Option (a)

Explanation: The particles in a solid are tightly packed together and have a fixed shape and volume, making option a) true. The particles in a liquid have a fixed volume but take the shape of the container they are in, making option b) false. The particles in a gas are far apart and have no fixed shape or volume, making option c) false. Plasma is a high-energy state of matter where the particles have broken apart into ions and free electrons, and it has no fixed shape or volume, making option d) false.

Thus, the correct answer is option (a).

Difficulty Level- medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q13) Which of the following is an example of a chemical change?**

a) Melting of ice

b) Dissolving of salt in water

c) Burning of wood

d) Cutting of paper

Correct Answer: Option (c)

Explanation: Chemical changes are those changes in matter that involve the formation of a new substance with different properties. The burning of wood is an example of a chemical change, as it involves the combustion of the wood and the formation of new substances such as carbon dioxide, water vapour, and ash.

Thus, the correct answer is option (c).

Difficulty Level- medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q14) What is the physical state of matter in which its molecules have the most kinetic energy?**

a) Solid

b) Liquid

c) Gas

d) Plasma

Correct Answer: Option (c)

Explanation: The kinetic energy of a substance's molecules is related to its physical state of matter. In a solid, the molecules are tightly packed and have low kinetic energy, while in a liquid, the molecules are more spread out and have slightly higher kinetic energy. In a gas, the molecules are completely spread out and have the most kinetic energy. Plasma is a fourth state of matter, in which the molecules are ionized and have extremely high kinetic energy, but it is not commonly encountered in everyday life.

Thus, the correct answer is option (c).

Difficulty Level- Medium

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q15) Which of the following substances is NOT an element?**

a) Gold (Au)

b) Hydrogen gas (H2)

c) Water (H2O)

d) Oxygen gas (O2)

Correct Answer: Option (c)

Explanation: An element is a substance that cannot be broken down into simpler substances by chemical means. Gold, hydrogen gas, and oxygen gas are all elements, while water is a compound made up of two elements, hydrogen, and oxygen.

Thus, the correct answer is option (c).

Difficulty Level- medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q16) Which of the following statements is true about a mixture?**

a) It has a fixed composition

b) It can only be separated by chemical means

c) Its properties are different from the properties of its components

d) It is always homogeneous

Correct Answer: Option (c)

Explanation: A mixture is a combination of two or more substances that are not chemically combined. Option c) correctly describes the property of a mixture. Options a) and d) are incorrect, as the composition and properties of a mixture can vary. Option b) is also incorrect, as a mixture can be separated by physical means.

Thus, the correct answer is option (c).

Difficulty Level- medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q17) Which of the following statements is true about the difference between elements and compounds?**

a) Elements are made up of two or more different types of atoms, whereas compounds are made up of only one type of atom.

b) Elements cannot be separated into simpler substances by chemical reactions, whereas compounds can be separated into their constituent elements by chemical reactions.

c) Elements and compounds have similar properties, and their composition is difficult to determine.

d) Elements and compounds are the same things, and the terms can be used interchangeably.

Correct Answer: Option (b)

Explanation: Elements are made up of only one type of atom, whereas compounds are made up of two or more different types of atoms bonded together chemically. Elements cannot be broken down into simpler substances by chemical reactions, whereas compounds can be broken down into their constituent elements by chemical reactions.

Thus, the correct answer is option (b).

Difficulty Level- hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q18) Which of the following properties of a substance is a physical property?**

a) Flammability

b) Reactivity with acids

c) Melting point

d) Ability to support combustion

Correct Answer: Option (c)

Explanation: The melting point is a physical property because it is a characteristic of a substance that can be observed or measured without changing the substance's identity. Flammability, reactivity with acids, and the ability to support combustion are chemical properties because they describe how a substance reacts with other substances to form new substances.

Thus, the correct answer is option (c).

Difficulty Level- hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q19) Which of the following elements has the highest electronegativity value?**

a) Carbon

b) Oxygen

c) Nitrogen

d) Fluorine

Correct Answer: Option (d)

Explanation: Electronegativity is the measure of the ability of an atom to attract electrons toward itself. The electronegativity value increases as we move from left to right in a periodic table and decreases as we move down a group. Among the given options, fluorine has the highest electronegativity value.

Thus, the correct answer is option (d).

Difficulty Level- hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q20) Answer the following question with reference to the audio**

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**TYPE: Audio**

**Which of the following is a non-metal?**

a) Copper

b) Sodium

c) Carbon

d) Iron

Correct Answer: Option (c)

Explanation: Non-metals are elements that have low melting and boiling points, are poor conductors of heat and electricity and are generally brittle. Among the given options, copper, sodium, and iron are metals, while carbon is non-metal.

Thus, the correct answer is option (c).

Difficulty Level- hard

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q21) Which of the following is true about the law of conservation of mass?**

a) Mass can be created or destroyed during a chemical reaction

b) The total mass of the reactants is equal to the total mass of the products

c) The mass of the products is always greater than the mass of the reactants

d) The law applies only to reactions involving gases

Correct Answer: Option (b)

Explanation: The law of conservation of mass states that mass can neither be created nor destroyed during a chemical reaction, but can only be rearranged into different forms. Hence, option a) is incorrect. According to the law, the total mass of the reactants is always equal to the total mass of the products. Option c) is incorrect as it violates the law of conservation of mass. Option d) is incorrect because the law applies to all types of chemical reactions, not just those involving gases.

Thus, the correct answer is option (b).

Difficulty Level- hard

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q22) Which of the following elements has the highest electron affinity?**

a) Chlorine

b) Oxygen

c) Nitrogen

d) Fluorine

Correct Answer: Option (d)

Explanation: Electron affinity refers to the energy change that occurs when an electron is added to a neutral atom in the gas phase. The greater the electron affinity, the more energy is released when an electron is added. Fluorine has the highest electron affinity of all the elements, meaning it releases the most energy when an electron is added.

Thus, the correct answer is option (d).

Difficulty Level- hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q23) Which of the following statements is true regarding a mixture?**

a) A mixture always has a fixed composition.

b) A mixture can be separated into its components by physical means.

c) A mixture always has the same properties as its components.

d) A mixture is always a single substance.

Correct Answer: Option (b)

Explanation: A mixture refers to a combination of two or more substances that are not chemically combined. Option b) is correct because a mixture can be separated into its components by physical means, such as distillation or filtration. Option a) is incorrect because a mixture does not have a fixed composition - it can vary depending on the amount of each component present. Option c) is also incorrect because a mixture can have different properties than its components, depending on their proportions. Option d) is incorrect because a mixture is not a single substance, but rather a combination of multiple substances.

Thus, the correct answer is option (b).

Difficulty Level- hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q24) Which of the following statements is true regarding the kinetic theory of matter?**

a) All particles in a substance have the same kinetic energy.

b) The higher the temperature of a substance, the lower the average kinetic energy of its particles.

c) The volume of a gas is directly proportional to the number of particles present.

d) The pressure of a gas is directly proportional to the average kinetic energy of its particles.

Correct Answer: Option (d)

Explanation: The kinetic theory of matter describes the behaviour of particles in the matter based on their motion and energy. Option d) is correct because the pressure of a gas is directly proportional to the average kinetic energy of its particles - the more kinetic energy the particles have, the higher the pressure they exert on their container. Option a) is incorrect because particles in a substance can have different kinetic energies. Option b) is also incorrect because the higher the temperature of a substance, the higher the average kinetic energy of its particles. Option c) is incorrect because the volume of a gas is proportional to the number of particles present and the temperature, but not necessarily directly proportional.

Thus, the correct answer is option (d).

Difficulty Level- hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q25) Which of the following is a chemical change?**

a) Ice melting into water

b) Burning of wood

c) Dissolving sugar in water

d) Stretching of rubber band

Correct Answer: Option (b)

Explanation: A chemical change is a process that results in the formation of a new substance with different properties. The burning of wood is a chemical change because it involves the reaction of wood with oxygen to produce new substances like carbon dioxide, water, and ash. Options a), c), and d) are physical changes, as they do not involve the formation of new substances.

Thus, the correct answer is option (b).

Difficulty Level- hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q26) What happens to the boiling point of water at higher altitudes?**

a) It increases

b) It decreases

c) It remains the same

d) It depends on the atmospheric pressure

Correct Answer: Option (b)

Explanation: The boiling point of a substance is the temperature at which its vapour pressure equals the atmospheric pressure. At higher altitudes, the atmospheric pressure decreases, which leads to a decrease in the boiling point of water.

Thus, the correct answer is option (b).

Difficulty Level- hard

Bloom’s Taxonomy- Evaluate

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q27) Which of the following statements is NOT true about the kinetic theory of matter?**

a) All matter is composed of small particles.

b) These particles are in constant motion.

c) The temperature of a substance is directly proportional to the average kinetic energy of its particles.

d) The particles in a gas are arranged in a regular pattern.

Correct Answer: Option (d)

Explanation: The kinetic theory of matter is based on the idea that matter is composed of small particles in constant motion. The temperature of a substance is directly proportional to the average kinetic energy of its particles. However, option d) is not true, as the particles in a gas are not arranged in a regular pattern. They are randomly arranged and move freely in all directions.

Thus, the correct answer is option (d).

Difficulty Level- hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q28) Which of the following is true about the ideal gas law?**

a) It is only applicable to real gases under high pressure.

b) It relates the pressure, volume, temperature, and number of moles of an ideal gas.

c) It is only applicable to real gases at low temperatures.

d) It is a qualitative law that describes the behaviour of all gases.

Correct Answer: Option (b)

Explanation: The ideal gas law is a quantitative law that describes the behaviour of an ideal gas. It relates the pressure, volume, temperature, and number of moles of an ideal gas through the equation PV = nRT, where P is the pressure, V is the volume, n is the number of moles, R is the gas constant, and T is the temperature

Thus, the correct answer is option (b).

Difficulty Level- hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q29) Answer the following question with reference to the audio**

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**TYPE: Audio**

**Which of the following is NOT a colligative property of a solution?**

a) Boiling point elevation

b) Freezing point depression

c) Osmotic pressure

d) Viscosity

Correct Answer: Option (d)

Explanation: Colligative properties of a solution are properties that depend on the number of solute particles present in a given amount of solvent. Boiling point elevation, freezing point depression, and osmotic pressure are examples of colligative properties. Viscosity, however, is not a colligative property, as it depends on the nature of the solvent and solute molecules and their interaction with each other

Thus, the correct answer is option (d).

Difficulty Level- hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q30) Which of the following statements is true about the subatomic particles of an atom?**

a) Protons and neutrons are located in the nucleus, while electrons are located in the electron cloud.

b) Protons and electrons are located in the nucleus, while neutrons are located in the electron cloud.

c) Electrons and neutrons are located in the nucleus, while protons are located in the electron cloud.

d) Protons, electrons, and neutrons are located in the nucleus.

Correct Answer: Option (a)

Explanation: An atom is composed of subatomic particles, including protons, neutrons, and electrons. Protons and neutrons are located in the nucleus of the atom, while electrons are located in the electron cloud outside the nucleus. Option b) is incorrect because electrons are not located in the nucleus. Option c) is incorrect because protons are located in the nucleus, not the electron cloud. Option d) is incorrect because electrons are not located in the nucleus.

Thus, the correct answer is option (a).

Difficulty Level- hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q31) Answer the following question with reference to the audio**

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**TYPE: Audio**

**Which one of the following DOES NOT describe a feature of living things?**

a) Reproduction

b) Metabolism

c) Homeostasis

d) Inorganic composition

Correct Answer: Option (d)

Explanation: Living organisms possess certain characteristics that distinguish them from non-living things. These characteristics include reproduction, metabolism, and homeostasis. Inorganic composition refers to non-living substances and is not a characteristic of living organisms.

Thus, the correct answer is option (d).

Difficulty Level- Easy

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q32) Answer the following question with reference to the audio**

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**TYPE: Audio**

**Which of the following is NOT a component of a prokaryotic cell?**

a) Cell membrane

b) Nucleus

c) Cytoplasm

d) Ribosomes

Correct Answer: Option (b)

Explanation: Prokaryotic cells are characterized by the absence of a nucleus and other membrane-bound organelles. They contain a cell membrane, cytoplasm, and ribosomes, but not a nucleus. If plasmids are absent, the cell would still contain all of these components. However, it would not have plasmids, which are not considered to be a necessary component of a prokaryotic cell.

Thus, the correct answer is option (b).

Difficulty Level- Easy

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q33) Which of the following is responsible for the synthesis of proteins in a cell?**

a) Ribosomes

b) Mitochondria

c) Golgi apparatus

d) Endoplasmic reticulum

Correct Answer: Option (a)

Explanation: Ribosomes are responsible for the synthesis of proteins in a cell. Mitochondria are involved in the production of energy, while the Golgi apparatus and endoplasmic reticulum are involved in the processing and transport of proteins.

Thus, the correct answer is option (a).

Difficulty Level- Easy

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q34) Which of the following is the correct order of levels of organization in living organisms, from smallest to largest?**

a) Cells, tissues, organs, organ systems, organism

b) Cells, organs, tissues, organ systems, organism

c) Organs, cells, tissues, organ systems, organism

d) Tissues, cells, organs, organ systems, organism

Correct Answer: Option (a)

Explanation: Atoms are the basic units of matter that make up all living and non-living things. Molecules are groups of atoms bonded together to form larger structures with specific functions. Cells are the smallest unit of life that can carry out all the functions necessary for survival. Tissues are groups of similar cells that work together to perform a specific function. Organs are made up of different types of tissues that work together to perform a specific function. Organ systems are groups of organs that work together to perform a specific function. Organisms are individual living things composed of various organ systems. The correct order of levels of organization in living organisms, from smallest to largest, is cells, tissues, organs, organ systems, and organisms.

Thus, the correct answer is option (a).

Difficulty Level- Easy

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q35) Answer the following question with reference to the audio**

[**https://drive.google.com/file/d/1rRbZ0ygxy68fbqQbndExLk6MvNRQixLI/view?usp=share\_link**](https://drive.google.com/file/d/1rRbZ0ygxy68fbqQbndExLk6MvNRQixLI/view?usp=share_link)

**TYPE: Audio**

**Which of the following is NOT a function of the digestive system?**

a) Absorption of nutrients

b) Elimination of waste products

c) Transport of oxygen

d) Breakdown of food into simpler molecules

Correct Answer: Option (c)

Explanation: The digestive system is responsible for the breakdown of food into simpler molecules, absorption of nutrients, and elimination of waste products. The transport of oxygen is the function of the respiratory system.

Thus, the correct answer is option (c).

Difficulty Level- Easy

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q36) Which of the following is responsible for the regulation of body temperature in humans?**

a) Hypothalamus

b) Pineal gland

c) Pituitary gland

d) Thyroid gland

Correct Answer: Option (a)

Explanation: The hypothalamus is responsible for the regulation of body temperature in humans. The pineal gland is responsible for the regulation of sleep patterns, the pituitary gland is responsible for the production of hormones, and the thyroid gland is responsible for the regulation of metabolism.

Thus, the correct answer is option (a).

Difficulty Level- Easy

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q37) Which of the following is NOT a type of muscle tissue in the human body?**

a) Skeletal muscle

b) Cardiac muscle

c) Smooth muscle

d) Adipose tissue

Correct Answer: Option (d)

Explanation: Skeletal muscle, cardiac muscle, and smooth muscle are types of muscle tissue in the human body. Adipose tissue is a type of connective tissue that stores fat. It is composed of adipocytes, which are specialized cells that are capable of storing large amounts of fat in the form of triglycerides. Adipose tissue plays several important roles in the body. One of its primary functions is to serve as an energy reserve. When the body needs energy, it can break down the triglycerides stored in adipose tissue to release fatty acids that can be used as fuel by the body's cells. Adipose tissue also serves as a thermal insulator, helping to regulate body temperature by providing an insulating layer beneath the skin.

Thus, the correct answer is option (d).

Difficulty Level- Easy

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q38) Which of the following is responsible for providing support and protection to the body?**

a) Muscle tissue

b) Connective tissue

c) Nervous tissue

d) Epithelial tissue

Correct Answer: Option (b)

Explanation: Connective tissue is a type of tissue in the body that provides structural support, connects and binds different tissues and organs together, and helps to protect and cushion organs. It is the most abundant and widely distributed tissue in the body and is composed of cells and an extracellular matrix that is secreted by these cells. There are several different types of connective tissue, each with its unique characteristics and functions. It includes bone tissue, cartilage tissue, blood tissue, and adipose tissue.

Thus, the correct answer is option (b).

Difficulty Level- Easy

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q39) Which of the following is NOT a type of connective tissue in the body?**

a) Bone tissue

b) Nervous tissue

c) Blood tissue

d) Cartilage tissue

Correct Answer: Option (b)

Explanation: Connective tissue is a type of tissue in the body that provides support and protection. It includes bone tissue, blood tissue, and cartilage tissue, but not nervous tissue. Connective tissue is essential for the proper functioning of the body, and disruptions in its structure or function can lead to a variety of health problems. For example, disorders like osteoporosis, arthritis, and scleroderma all involve abnormalities in connective tissue.

Thus, the correct answer is option (b).

Difficulty Level- Easy

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q40) Answer the following question with reference to the audio**

[**https://drive.google.com/file/d/11K\_\_PBgwdCdKgU7KnQJdjAVoiQGWSwss/view?usp=share\_link**](https://drive.google.com/file/d/11K__PBgwdCdKgU7KnQJdjAVoiQGWSwss/view?usp=share_link)

**TYPE: Audio**

**What is the function of the circulatory system in the body?**

a) Gas exchange

b) Transportation of nutrients and waste

c) Production of hormones

d) Sensory input

Correct Answer: Option (b)

Explanation: The circulatory system plays a crucial role in the body by delivering oxygen, nutrients, and other essential substances to all the cells, tissues, and organs of the body. It is also responsible for removing waste products and carbon dioxide from the cells and transporting them to the organs responsible for their elimination. The circulatory system consists of the heart, blood vessels, and blood. It is not involved in gas exchange, hormone production, or sensory input.

Thus, the correct answer is option (b).

Difficulty Level- Easy

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q41) What is the function of the nervous system in the body?**

a) Regulation of body temperature

b) Production of hormones

c) Coordination of body movements

d) Protection against infections

Correct Answer: Option (c)

Explanation: The nervous system is responsible for the coordination of body movements and the transmission of signals between different parts of the body. It is not involved in the regulation of body temperature, hormone production, or protection against infections.

Thus, the correct answer is option (c).

Difficulty Level- medium

Bloom’s Taxonomy- Create

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q42) Which of the following is not a function of the cell membrane?**

a) Regulating the movement of substances in and out of the cell

b) Maintaining the shape and structure of the cell

c) Recognizing and responding to signals from other cells

d) Providing support and protection to the cell

Correct Answer: Option (c)

Explanation: The cell membrane plays a vital role in regulating the movement of substances in and out of the cell, recognizing and responding to signals from other cells, and providing support and protection to the cell. However, maintaining the shape and structure of the cell is a function of the cytoskeleton, not the cell membrane.

Thus, the correct answer is option (c).

Difficulty Level- medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q43) Which of the following is a characteristic of eukaryotic cells?**

a) Presence of a cell wall

b) Absence of a nucleus

c) Presence of membrane-bound organelles

d) Presence of circular DNA

Correct Answer: Option (c)

Explanation: Eukaryotic cells are characterized by the presence of a nucleus, which contains genetic material. Additionally, eukaryotic cells also have membrane-bound organelles such as mitochondria, lysosomes, and endoplasmic reticulum.

Thus, the correct answer is option (c).

Difficulty Level- medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q44) Which of the following is not a component of an ecosystem?**

a) Abiotic Factors

b) Biotic Factors

c) Producers

d) Carbohydrates

Correct Answer: Option (d)

Explanation: Carbohydrates are one of the main types of macronutrients that provide energy to the body. They are composed of carbon, hydrogen, and oxygen atoms, and are classified into different types based on their chemical structure. Some examples of carbohydrates include sugars, starches, and fibres. Carbohydrates are not a component of an ecosystem, but rather a type of organic molecule that living organisms use for energy. The components of an ecosystem include abiotic factors, biotic factors, producers, consumers, and decomposers.

Thus, the correct answer is option (d).

Difficulty Level- medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q45) Which of the following is not a characteristic of living organisms?**

a) Reproduction

b) Growth and development

c) Ability to make their food

d) Response to stimuli

Correct Answer: Option (c)

Explanation: Ability to make their food. Living organisms may either produce their food or consume other organisms, but not all of them can make their food. All living organisms exhibit certain characteristics such as growth, reproduction, response to stimuli, and maintenance of homeostasis. However, the ability to make their food is not a universal characteristic of living organisms. Autotrophic organisms, such as plants, are capable of producing their food through photosynthesis, while heterotrophic organisms, such as animals, obtain their food by consuming other organisms.

Thus, the correct answer is option (c).

Difficulty Level- medium

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q46) Which of the following is a level of biological organization that includes all the other levels?**

a) Organ system

b) Organism

c) Cell

d) Biosphere

Correct Answer: Option (d)

Explanation: The biosphere is the highest level of biological organization that includes all the other levels.

The levels of biological organization, in order from smallest to largest, are atom, molecule, cell, tissue, organ, organ system, organism, population, community, ecosystem, and biosphere. The biosphere includes all the living organisms on Earth and the environments in which they live.

Thus, the correct answer is option (d).

Difficulty Level- medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q47) The process by which organisms maintain a stable internal environment despite changes in their external environment is called:**

a) Homeostasis

b) Metabolism

c) Respiration

d) Photosynthesis

Correct Answer: Option (a)

Explanation: Homeostasis is the process by which organisms maintain a stable internal environment despite changes in their external environment. Organisms need to maintain a stable internal environment to survive. Homeostasis involves processes such as regulation of body temperature, pH, and concentration of various substances in the body.

Thus, the correct answer is option (a).

Difficulty Level- medium

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q48) Which of the following is a characteristic of prokaryotic cells?**

a) Presence of a nucleus

b) Presence of membrane-bound organelles

c) Presence of ribosomes

d) Presence of mitochondria

Correct Answer: Option (c)

Explanation: Presence of ribosomes. Prokaryotic cells are cells that lack a nucleus and membrane-bound organelles, but they do contain ribosomes. Prokaryotic cells are much smaller in size compared to eukaryotic cells and have a simple structure. They have a cell membrane that encloses the cytoplasm, which contains the genetic material (DNA) in the form of a single circular chromosome. Prokaryotic cells also have ribosomes, which are responsible for protein synthesis. They do, however, contain ribosomes, which are responsible for protein synthesis.

Thus, the correct answer is option (c).

Difficulty Level- medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q49) Which of the following is not a type of connective tissue?**

a) Blood

b) Cartilage

c) Adipose tissue

d) Nerve tissue

Correct Answer: Option (d)

Explanation: Nerve tissue is not a type of connective tissue. Connective tissue is a type of tissue that provides support and structure to the body. Examples of connective tissue include blood, cartilage, adipose tissue, bone, and loose and dense connective tissue. Nerve tissue, on the other hand, is a type of tissue that is responsible for transmitting nerve impulses throughout the body.

Thus, the correct answer is option (d).

Difficulty Level- medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q50) Which of the following is NOT a type of muscle tissue found in humans?**

a) Skeletal

b) Cardiac

c) Smooth

d) Striated

Correct Answer: Option (d)

Explanation: The three types of muscle tissue found in humans are skeletal, cardiac, and smooth. Striated is not a type of muscle tissue found in humans. Striated is a term used to describe the appearance of skeletal and cardiac muscle tissue under a microscope, but it is not a type of muscle tissue in itself.

Thus, the correct answer is option (d).

Difficulty Level- Hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q51) Which of the following is NOT a function of the integumentary system?**

a) Protection from physical damage and pathogens

b) Temperature regulation

c) Vitamin D synthesis

d) Production of blood cells

Correct Answer: Option (d)

Explanation: The integumentary system does not produce blood cells. The integumentary system is the body's first line of defence against physical damage and pathogens. It also helps regulate body temperature, synthesizes vitamin D, and contains sensory receptors for touch, pressure, and pain. However, blood cell production occurs in the bone marrow, not the integumentary system.

Thus, the correct answer is option (d).

Difficulty Level- Hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q52) Which of the following is NOT a characteristic of enzymes?**

a) They are catalysts that speed up chemical reactions

b) They are specific to certain substrates

c) They are consumed in the reaction they catalyse

d) They are affected by changes in temperature and pH

Correct Answer: Option (c)

Explanation: Enzymes are not consumed in the reactions they catalyse. Enzymes are biological catalysts that increase the rate of chemical reactions without being consumed themselves. They are specific to certain substrates, meaning they only catalyse reactions involving certain molecules. Enzymes are also affected by changes in temperature and pH, and their activity can be regulated by other molecules.

Thus, the correct answer is option (d).

Difficulty Level- Hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q53) Which of the following is NOT a component of the respiratory system in humans?**

a) Larynx

b) Trachea

c) Pancreas

d) Bronchi

Correct Answer: Option (c)

Explanation: The pancreas is not a component of the respiratory system in humans. The respiratory system in humans includes the nose, pharynx, larynx, trachea, bronchi, bronchioles, and lungs. The pancreas is part of the digestive system and is involved in producing digestive enzymes and hormones that regulate blood sugar levels.

Thus, the correct answer is option (c).

Difficulty Level- Hard

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q54) Answer the following question with reference to the audio**

[**https://drive.google.com/file/d/1RQszqJAfz1mup8Z94yYapkzcpops71ym/view?usp=share\_link**](https://drive.google.com/file/d/1RQszqJAfz1mup8Z94yYapkzcpops71ym/view?usp=share_link)

**TYPE: Audio**

**Which of the following is NOT a type of epithelial tissue found in humans?**

a) Squamous

b) Cuboidal

c) Columnar

d) Osteoid

Correct Answer: Option (d)

Explanation: Osteoid is not a type of epithelial tissue found in humans. Epithelial tissue covers the surfaces of the body and lines the internal organs and cavities. The three types of epithelial tissue found in humans are squamous, cuboidal, and columnar. Osteoid refers to a type of bone tissue that is involved in bone formation, but it is not considered an epithelial tissue.

Thus, the correct answer is option (d).

Difficulty Level- Hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q55) Which of the following is not a function of the plasma membrane?**

a) Maintaining the shape of the cell

b) Regulating the movement of substances in and out of the cell

c) Facilitating cell-cell communication

d) Synthesizing proteins for the cell

Correct Answer: Option (d)

Explanation: The plasma membrane is responsible for many functions, but it does not synthesize proteins for the cell. The plasma membrane is a selectively permeable membrane that surrounds the cell, separating its internal environment from the external environment. It is responsible for maintaining the shape of the cell, regulating the movement of substances in and out of the cell, and facilitating cell-cell communication. Protein synthesis occurs in the ribosomes and endoplasmic reticulum, not in the plasma membrane.

Thus, the correct answer is option (d).

Difficulty Level- Hard

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q56) Which of the following is not a type of tissue found in animals?**

a) Epithelial tissue

b) Muscle tissue

c) Nervous tissue

d) Vascular tissue

Correct Answer: Option (d)

Explanation: Vascular tissue is not a type of tissue found in animals. Vascular tissue is a type of tissue found in plants that is responsible for transporting water and nutrients throughout the plant. In animals, the four basic types of tissue are epithelial, connective, muscle, and nervous tissue.

Thus, the correct answer is option (d).

Difficulty Level- Hard

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q57) Which of the following is not a characteristic of eukaryotic cells?**

a) Presence of a nucleus

b) Presence of membrane-bound organelles

c) Presence of ribosomes

d) Absence of a plasma membrane

Correct Answer: Option (d)

Explanation: Eukaryotic cells have a plasma membrane. Eukaryotic cells are cells that have a nucleus and membrane-bound organelles. They also have a plasma membrane that separates the cell's internal environment from the external environment. Ribosomes are also present in eukaryotic cells.

Thus, the correct answer is option (d).

Difficulty Level- Hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q58) Which of the following is not a function of the skeletal system?**

a) Protection of internal organs

b) Storage of minerals such as calcium and phosphorus

c) Regulation of body temperature

d) Production of red blood cells

Correct Answer: Option (c)

Explanation: The skeletal system is not directly involved in regulating body temperature. The skeletal system provides support and protection for the body, and it also plays a role in the movement and production of blood cells. Additionally, the bones of the skeletal system store minerals such as calcium and phosphorus.

Thus, the correct answer is option (c).

Difficulty Level- Hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q59) Which of the following is not a type of plant tissue?**

a) Epidermal tissue

b) Ground tissue

c) Vascular tissue

d) Adipose tissue

Correct Answer: Option (c)

Explanation: Adipose tissue is not a type of plant tissue. Adipose tissue is a type of connective tissue found in animals that is responsible for storing energy in the form of fat. In plants, the three main types of tissue are epidermal tissue, ground tissue, and vascular tissue.

Thus, the correct answer is option (d).

Difficulty Level- Hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q60) Which of the following is characteristic of non-living organisms?**

a) Reproduction

b) Growth

c) Movement

d) Rock Formation

Correct Answer: Option (d)

Explanation: Living organisms are characterized by various features, including the ability to reproduce, grow, and move. Reproduction refers to the ability of an organism to produce offspring, ensuring the continuation of its species. Growth involves an increase in the size, mass, or complexity of an organism over time. Movement refers to the ability of an organism to change its position or location either as a whole or part of it.

However, "Rock Formation" is not a characteristic of living organisms. It is a natural geological process that involves the formation of rocks through various physical and chemical processes.

Thus, the correct answer is option (d).

Difficulty Level- Hard

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q61) Answer the following question with reference to the audio**

[**https://drive.google.com/file/d/16aHienHFMIhWU90XmIls7csPpcBNDrUR/view?usp=share\_link**](https://drive.google.com/file/d/16aHienHFMIhWU90XmIls7csPpcBNDrUR/view?usp=share_link)

**TYPE: Audio**

**Which of the following is an example of non-contact force?**

a) Frictional force

b) Magnetic force

c) Gravitational force

d) Normal force

Correct Answer: Option (b)

Explanation: Non-contact force refers to the force exerted on an object without any physical contact. Magnetic force is an example of non-contact force as it is exerted by a magnet on another object without any direct contact.

Thus, the correct answer is option (b).

Difficulty Level- Easy

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q62) Which of the following is an example of Newton's second law of motion?**

a) A ball rolling down a hill

b) A rocket taking off from a launch pad

c) A person pushing a box across a room at a constant velocity

d) A car moving at a constant speed on a flat road

Correct Answer: Option (c)

Explanation: A person pushing a box across a room at a constant velocity. Newton's second law of motion states that the acceleration of an object is directly proportional to the force applied to it and inversely proportional to its mass. In the case of a person pushing a box across a room at a constant velocity, the force applied by the person is equal and opposite to the force of friction acting on the box, resulting in a constant velocity.

Thus, the correct answer is option (b).

Difficulty Level- Easy

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q63) Answer the following question with reference to the audio**

[**https://drive.google.com/file/d/1Aia7BhZy2F-ejnaY5f34cJdviIs6OF54/view?usp=share\_link**](https://drive.google.com/file/d/1Aia7BhZy2F-ejnaY5f34cJdviIs6OF54/view?usp=share_link)

**TYPE: Audio**

**Which of the following is a scalar quantity?**

a) Force

b) Velocity

c) Acceleration

d) Distance

Correct Answer: Option (d)

Explanation: Scalar quantity refers to a physical quantity that has only magnitude and no direction. Distance is a scalar quantity as it only specifies the length or size of a path covered by an object, without any reference to its direction.

Thus, the correct answer is option (d).

Difficulty Level- Easy

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q64) What is the net force acting on an object when two equal forces are acting on it in opposite directions?**

a) Zero

b) Double the force

c) Half the force

d) Equal to the force acting in one direction

Correct Answer: Option (a)

Explanation: When two equal forces act on an object in opposite directions, the net force acting on the object is zero. This means that the object will not experience any acceleration or change in motion.

Thus, the correct answer is option (a).

Difficulty Level- Easy

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q65) Which of the following is an example of a balanced force?**

a) A ball rolling down a hill

b) A car moving at a constant speed on a flat road

c) A rocket taking off from a launch pad

d) A person pushing a box across a room at a constant velocity

Correct Answer: Option (b)

Explanation: Balanced forces are those forces that cancel each other out and result in no change in the motion of the object. In the case of a car moving at a constant speed on a flat road, the forces acting on the car are balanced as the force of friction between the car's wheels and the road cancels out the force of the engine.

Thus, the correct answer is option (b).

Difficulty Level- Easy

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q66) What is the relationship between force, mass, and acceleration?**

a) Force = mass x acceleration

b) Force = mass/acceleration

c) Force = acceleration/mass

d) Force = mass + acceleration

Correct Answer: Option (a)

Explanation: According to Newton's second law of motion, the force acting on an object is equal to the product of its mass and acceleration.

This relationship can be expressed mathematically as F = m x a,

where F is the force, m is the mass, and a is the acceleration.

Thus, the correct answer is option (a).

Difficulty Level- Easy

Bloom’s Taxonomy- Evaluate

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q67) Which of the following statements is true about force and acceleration?**

a) Force and acceleration are directly proportional

b) Force and acceleration are inversely proportional

c) Force and acceleration have no relationship

d) Force and acceleration vary randomly

Correct Answer: Option (a)

Explanation: According to Newton's second law of motion, force, and acceleration are directly proportional. This means that if the force acting on an object increases, the acceleration also increases, and if the force decreases, the acceleration also decreases.

Thus, the correct answer is option (a).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q68) Which of the following statements is true about work?**

a) Work is always positive

b) Work can be both positive and negative

c) Work is always negative

d) Work is always zero

Correct Answer: Option (b)

Explanation: Work is the product of force and displacement, and it can be positive, negative, or zero. If the force and displacement are in the same direction, the work is positive, if they are in opposite directions, the work is negative, and if there is no displacement, the work is zero.

Thus, the correct answer is option (b).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q69) Which of the following is an example of a conservative force?**

a) Frictional force

b) Magnetic force

c) Gravitational force

d) Applied force

Correct Answer: Option (c)

Explanation: A conservative force is a force that does not depend on the path taken by the object and only depends on its initial and final positions. Gravitational force is an example of a conservative force as it only depends on the positions of the objects and not on the path taken by them.

Thus, the correct answer is option (c).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q70) Answer the following question with reference to the audio**

[**https://drive.google.com/file/d/1qrBFAXaf4JlVfLq65EMZoryIKz93YHZI/view?usp=share\_link**](https://drive.google.com/file/d/1qrBFAXaf4JlVfLq65EMZoryIKz93YHZI/view?usp=share_link)

**TYPE: Audio**

**Which of the following statements is true about potential energy?**

a) Potential energy is the energy of motion

b) Potential energy is the energy of position

c) Potential energy is the energy of sound

d) Potential energy is the energy of light

Correct Answer: Option (c)

Explanation: Potential energy is the energy that an object possesses due to its position or state. It is a form of energy that is stored and can be converted into other forms of energy, such as kinetic energy.

Thus, the correct answer is option (c).

Difficulty Level- Medium

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q71) Which of the following statements is true about the law of conservation of energy?**

a) Energy can be created but not destroyed

b) Energy can be destroyed but not created

c) Energy can be neither created nor destroyed

d) Energy can be both created and destroyed

Correct Answer: Option (c)

Explanation: The law of conservation of energy states that energy cannot be created or destroyed, but it can be transformed from one form to another. This means that the total amount of energy in a system remains constant.

Thus, the correct answer is option (c).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q72) Which of the following is an example of a non-inertial frame of reference?**

a) A car moving at a constant speed on a straight road

b) A train moving on a straight track

c) A lift accelerating upward

d) A rocket moving in space

Correct Answer: Option (c)

Explanation: A non-inertial frame of reference is a frame of reference that is accelerating or rotating. In the case of a lift accelerating upward, the observer inside the lift experiences a force that is equivalent to the force of gravity, making it a non-inertial frame of reference.

Thus, the correct answer is option (c).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q73) Which of the following is an example of a non-conservative force?**

a) Gravitational force

b) Magnetic force

c) Frictional force

d) Normal force

Correct Answer: Option (c)

Explanation: A non-conservative force is a force that depends on the path taken by the object and not just on its initial and final positions. The frictional force is an example of a non-conservative force as it depends on the surface and the nature of the objects in contact.

Thus, the correct answer is option (c).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q74) Which of the following is an example of conservation of momentum?**

a) A ball bouncing off a wall

b) A rocket taking off from a launch pad

c) A person running and jumping

d) A car moving at a constant speed on a flat road

Correct Answer: Option (a)

Explanation: Conservation of momentum states that the total momentum of a system remains constant if no external force acts on it. In the case of a ball bouncing off a wall, the momentum of the ball before the collision is equal and opposite to the momentum of the ball after the collision, resulting in a conserved total momentum.

Thus, the correct answer is option (a).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q75) Which of the following is true about work done on an object?**

a) Work done is always equal to the force applied to the object.

b) Work done is always equal to the displacement of the object.

c) Work done can be negative if the force is in the opposite direction of the displacement.

d) Work done is independent of the time taken to do the work.

Correct Answer: Option (c)

Explanation: Work done is defined as the product of the force applied on an object and the displacement of the object in the direction of the force. If the force and displacement are in the same direction, then the work done is positive. If the force and displacement are in the opposite direction, then the work done is negative.

Thus, the correct answer is option (c).

Difficulty Level- Hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q76) Answer the following question with reference to the audio**

[**https://drive.google.com/file/d/1qrBFAXaf4JlVfLq65EMZoryIKz93YHZI/view?usp=share\_link**](https://drive.google.com/file/d/1qrBFAXaf4JlVfLq65EMZoryIKz93YHZI/view?usp=share_link)

**TYPE: Audio**

**Which of the following is true about the force of gravity?**

a) The force of gravity always acts in the same direction.

b) The force of gravity depends on the shape of the object.

c) The force of gravity is directly proportional to the mass of the object.

d) The force of gravity is independent of the distance between the objects.

Correct Answer: Option (c)

Explanation: The force of gravity is the force of attraction between two objects due to their mass. It is directly proportional to the product of their masses and inversely proportional to the square of the distance between them, according to Newton's law of universal gravitation.

Thus, the correct answer is option (c).

Difficulty Level- Hard

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q77) An object is moving with a velocity of 10 m/s. If a force of 20 N is applied to the object in the direction of motion, what will be the new velocity of the object after 5 seconds?**

a) 30 m/s

b) 50 m/s

c) 60 m/s

d) 80 m/s

Correct Answer: Option (c)

Explanation: The formula for acceleration is a = F/m.

Substituting the given values, we get a = 20 N / m.

Now, we use the formula v = u + at, where v is the final velocity, u is the initial velocity, a, is the acceleration, and t is the time.

Substituting the given values, we get v = 10 m/s + (20 N/m) × 5 s = 110 m/s.

Thus, the correct answer is option (c).

Difficulty Level- Hard

Bloom’s Taxonomy- Apply

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q78) A force of 100 N is applied to an object of mass 10 kg. What is the work done by the force in lifting the object through a height of 5 m?**

a) 50 J

b) 500 J

c) 1000 J

d) 5000 J

Correct Answer: Option (d)

Explanation: The formula for work done is W = F × d × cos θ, where W is the work done, F is the force applied, d is the displacement, and θ is the angle between the force and the displacement.

In this case, θ = 0 degrees because the force is acting in the upward direction and the displacement is also in the upward direction.

Therefore, the formula simplifies to W = F × d.

Substituting the given values, we get W = 100 N × 5 m = 500 J.

Thus, the correct answer is option (d).

Difficulty Level- Hard

Bloom’s Taxonomy- Apply

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q79) Which of the following statements is correct about kinetic friction?**

a) Kinetic friction is greater than static friction.

b) Kinetic friction is the force that opposes the motion of an object in motion.

c) Kinetic friction is always directed opposite to the motion of an object.

d) Kinetic friction is independent of the surface area of contact between two objects.

Correct Answer: Option (b)

Explanation: Kinetic friction is the force that opposes the motion of an object in motion, whereas static friction opposes the force applied to an object before it begins to move. Kinetic friction is a type of friction that occurs when two surfaces are in contact with each other and are moving relative to each other. It opposes the relative motion between the two surfaces and acts parallel to the contact surface. The magnitude of kinetic friction depends on the types of surfaces in contact and the force pressing them together. Kinetic friction is often characterized by the coefficient of kinetic friction, which is a dimensionless quantity that relates the force of kinetic friction to the normal force pressing the two surfaces together.

Thus, the correct answer is option (b).

Difficulty Level- Hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q80) What statement concerning potential energy is correct?**

a) Potential energy is the energy of motion.

b) Potential energy depends on the velocity of the object.

c) Potential energy is stored energy due to the position of an object.

d) Potential energy is the energy of an object at rest.

Correct Answer: Option (c)

Explanation: Potential energy is the energy stored in an object due to its position or configuration. It is not related to the motion of the object, so options a) and b) are incorrect. Also, potential energy can be present even when the object is not at rest, so option d is also incorrect.

Thus, the correct answer is option (b).

Difficulty Level- Hard

Bloom’s Taxonomy- Evaluate

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q81) A ball is thrown vertically upwards. At the highest point, which of the following statements is true about the velocity and acceleration of the ball?**

a) The velocity of the ball is zero, and its acceleration is also zero.

b) The velocity of the ball is zero, but its acceleration is non-zero.

c) The velocity of the ball is non-zero, and its acceleration is zero.

d) The velocity of the ball is non-zero, and its acceleration is also non-zero.

Correct Answer: Option (a)

Explanation: At the highest point, the velocity of the ball becomes zero since it reaches its maximum height. However, the acceleration of the ball is still acting on it due to the force of gravity, but it is zero as the direction of the acceleration is opposite to the velocity.

Thus, the correct answer is option (a).

Difficulty Level- Hard

Bloom’s Taxonomy- Apply

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q82) Which of the following statements is true about work done by a force?**

a) Work done is always positive

b) Work done can be negative, positive, or zero

c) Work done is always negative

d) Work done is always zero

Correct Answer: Option (b)

Explanation: Work done by a force is the product of the force and the displacement of the point of application of force in the direction of the force. Work done can be negative if the force and displacement are in opposite directions, positive if the force and displacement are in the same direction, and zero if the force and displacement are perpendicular to each other.

Thus, the correct answer is option (a).

Difficulty Level- Hard

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q83) Which of the following statements is true about kinetic friction?**

a) Kinetic friction is independent of the nature of the surfaces in contact.

b) Kinetic friction is always greater than static friction.

c) Kinetic friction is always less than static friction.

d) Kinetic friction depends on the normal force between the two surfaces.

Correct Answer: Option (d)

Explanation: Kinetic friction is the force of friction between two surfaces in relative motion. Option (a) is false because the nature of surfaces in contact does affect the force of kinetic friction. Option (b) is false because kinetic friction is generally less than static friction. Option (c) is also false for the same reason. Option (d) is correct because the force of kinetic friction is proportional to the normal force between the two surfaces in contact.

Thus, the correct answer is option (a).

Difficulty Level- Hard

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q84) A ball is thrown vertically upward. What is its velocity at the highest point?**

a) 0 m/s

b) 9.8 m/s

c) 19.6 m/s

d) 98 m/s

Correct Answer: Option (a)

Explanation: At the highest point, the velocity of the ball will be zero as the ball momentarily stops before falling back down due to gravity. The velocity of an object thrown upward is given by v = u - gt, where u is the initial velocity, g is the acceleration due to gravity, and t is the time taken to reach the highest point. As the ball reaches the highest point, t is equal to half of the total time taken for the ball to reach the highest point and then fall back down. Therefore, the velocity at the highest point is v = u - (1/2)gt.

Thus, the correct answer is option (a).

Difficulty Level- Hard

Bloom’s Taxonomy- Apply

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q85) A car of mass 1000 kg is traveling at a velocity of 20 m/s. What net force is required to bring the car to a complete stop in 10 seconds?**

a) 10000 N

b) 20000 N

c) 5000 N

d) 2500 N

Correct Answer: Option (b)

Explanation: To determine the net force required to bring the car to a complete stop in 10 seconds, we need to use the formula:

Net force = (mass x change in velocity) / time

Since the car is initially traveling at a velocity of 20 m/s and comes to a complete stop, the change in velocity is -20 m/s (negative since the car is slowing down). Therefore:

Net force = (1000 kg x (-20 m/s)) / 10 s

Net force = -20000 N

The negative sign indicates that the force is acting in the opposite direction of the car's motion. Therefore, the magnitude of the net force required to bring the car to a complete stop in 10 seconds is 20000 N.

Thus, the correct answer is option (b).

Difficulty Level- Hard

Bloom’s Taxonomy- Apply

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q86) A car of mass 1000 kg is moving with a velocity of 20 m/s. What is the minimum force required to stop the car in 5 seconds?**

a) 4000 N

b) 8000 N

c) 10000 N

d) 20000 N

Correct Answer: Option (a)

Explanation: The force required to stop the car is equal to the force of friction between the car and the ground. This force can be calculated using the formula F = ma, where m is the mass of the car and a is its acceleration. Since the car is slowing down, the acceleration is negative. Thus, we can calculate the force as F = ma = (-1000 kg) x (20 m/s)/(5 s) = -4000 N. Since the force of friction cannot be negative, we take the absolute value to get F = 4000 N.

Thus, the correct answer is option (a).

Difficulty Level- Hard

Bloom’s Taxonomy- Apply

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q87) A block of mass 10 kg is placed on a rough horizontal surface. A force of 50 N is applied to the block at an angle of 30 degrees with the horizontal. What is the acceleration of the block?**

a) 1.33 m/s^2

b) 2.50 m/s^2

c) 4.33 m/s^2

d) 5.00 m/s^2

Correct Answer: Option (a)

Explanation: The force applied to the block can be resolved into two components - one along the horizontal direction and one along the vertical direction. The component along the horizontal direction will cause the block to accelerate, while the component along the vertical direction will be balanced by the normal force of the surface.

The horizontal component of the force is given by:

Fh = F cos θ where F is the magnitude of the applied force and θ is the angle it makes with the horizontal.

Substituting the given values, we get:

Fh = 50 cos 30° = 50 x √3/2 = 25√3 N

The frictional force acting on the block can be found using:

f = μN where μ is the coefficient of kinetic friction between the block and the surface, and N is the normal force.

The normal force N can be found using the:

N = mg where m is the mass of the block and g is the acceleration due to gravity (approximately 9.8 m/s²).

Substituting the given values, we get:

N = 10 x 9.8 = 98 N

Assuming a coefficient of kinetic friction of 0.2 (which is not given in the question), we get:

f = 0.2 x 98 = 19.6 N

The net force acting on the block along the horizontal direction is:

Fnet = Fh - f = 25√3 - 19.6 = 5.96 N

The acceleration of the block can be found using the:

a = Fnet / m = 5.96 / 10 = 0.596 m/s²

Therefore, the acceleration of the block is approximately 0.596 m/s², which is closest to option (a) 1.33 m/s².

Thus, the correct answer is option (a).

Difficulty Level- Hard

Bloom’s Taxonomy- Apply

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q88) A boy pushes a box with a force of 20 N for a distance of 5 meters. What is the work done by the boy on the box?**

a) 50 J

b) 100 J

c) 200 J

d) 400 J

Correct Answer: Option (b)

Explanation: The work done by a force is given by the equation:

W = F × d × cos θ

where W is the work done, F is the force applied, d is the distance moved, and θ is the angle between the force and the displacement.

In this case, the angle between the force and displacement is zero (cos θ = 1), so we can simplify the equation to:

W = F × d

Substituting the values, we get:

W = 20 N × 5 m = 100 J

Thus, the correct answer is option (b).

Difficulty Level- Very Hard

Bloom’s Taxonomy- Apply

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**  
**Q89) A car is moving with a velocity of 20 m/s. It comes to a stop after traveling a distance of 50 meters. What is the magnitude of the acceleration of the car?**

a) 0.8 m/s^2

b) 1.6 m/s^2

c) 2.0 m/s^2

d) 4.0 m/s^2

Correct Answer: Option (d)

Explanation: To solve this problem, we can use the equation:

v^2 - u^2 = 2as

Where, v is the final velocity (0 m/s), u is the initial velocity (20 m/s), a, is the acceleration, and s is the distance travelled (50 m).

Substituting the values, we get:

0^2 - 20^2 = 2a (50)

-400 = 100a

a = -4 m/s^2 (negative sign indicates deceleration)

Thus, the correct answer is option (d).

Difficulty Level- Very Hard

Bloom’s Taxonomy- Apply

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q90) Answer the following question with reference to the audio**

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**TYPE: Audio**

**Which of the following statements is true regarding the relationship between force and acceleration?**

a) Force and acceleration are directly proportional.

b) Force and acceleration are inversely proportional.

c) Force and acceleration are independent of each other.

d) Force and acceleration have a logarithmic relationship.

Correct Answer: Option (a)

Explanation: The relationship between force and acceleration is described by Newton's second law, which states that the force acting on an object is directly proportional to its acceleration, provided the mass of the object remains constant. In other words, the greater the force applied to an object, the greater the acceleration it will experience.

Thus, the correct answer is option (a).

Difficulty Level- Very Hard

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q91) Which of the following is a method of food preservation?**

a) Boiling

b) Baking

c) Freezing

d) Frying

Correct Answer: Option (c)

Explanation: Freezing is a method of food preservation in which food is stored at low temperatures, typically below -18°C. This method slows down the growth of bacteria and other microorganisms that cause food to spoil. Boiling, baking, and frying are cooking methods, not preservation methods.

Thus, the correct answer is option (c).

Difficulty Level- Easy

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q92) Answer the following question with reference to the audio**

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**TYPE: Audio**

**What is the main function of carbohydrates in our body?**

a) To provide energy

b) To build muscles

c) To regulate body temperature

d) To transport oxygen

Correct Answer: Option (a)

Explanation: Carbohydrates are one of the three main macronutrients that our body needs in large amounts to function properly. The main function of carbohydrates is to provide energy to the body. They are broken down into glucose, which is used by the cells as a source of energy. Proteins are responsible for building and repairing muscles, regulating body temperature, and transporting oxygen.

Thus, the correct answer is option (a).

Difficulty Level- Easy

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q93) Which of the following is a crop produced through organic farming?**

a) Wheat is grown with chemical fertilizers

b) Rice is grown with genetically modified seeds

c) Tomatoes are grown with pesticides and herbicides

d) Spinach is grown without synthetic pesticides

Correct Answer: Option (d)

Explanation: Organic farming is a method of agriculture that relies on natural methods of pest and weed control, and avoids using synthetic fertilizers, pesticides, and genetically modified organisms (GMOs). Spinach grown without synthetic pesticides is an example of a crop produced through organic farming. Wheat grown with chemical fertilizers, rice grown with genetically modified seeds, and tomatoes grown with pesticides and herbicides are not produced through organic farming.

Thus, the correct answer is option (a).

Difficulty Level- Easy

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q94) Answer the following question with reference to the audio**

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**TYPE: Audio**

**Which of the following is NOT a method of food preservation?**

a) Canning

b) Drying

c) Freezing

d) Cooking

Correct Answer: Option (d)

Explanation: Cooking is a method of preparing food and making it safe for consumption, but it is not a method of food preservation. Canning, drying, and freezing are all methods of food preservation, which involve either removing moisture or using low temperatures to slow down the growth of microorganisms that can spoil food.

Thus, the correct answer is option (d).

Difficulty Level- Easy

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q95) What is the primary function of the stomach in the digestive system?**

a) Absorbing nutrients

b) Breaking down food

c) Producing enzymes

d) Storing waste

Correct Answer: Option (b)

Explanation: The stomach is a muscular organ in the digestive system that mixes food with digestive juices and breaks it down into smaller pieces through muscular contractions. This process is called mechanical digestion. The stomach also produces gastric juices that help to break down proteins and other nutrients, but its primary function is to break down food.

Thus, the correct answer is option (b).

Difficulty Level- Easy

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q96) Answer the following question with reference to the audio**

[**https://drive.google.com/file/d/1bkPYRxFEtfIh-qF\_KD06HTqasyCcFzN-/view?usp=share\_link**](https://drive.google.com/file/d/1bkPYRxFEtfIh-qF_KD06HTqasyCcFzN-/view?usp=share_link)

**TYPE: Audio**

**Which of the following is an example of a monocot plant?**

a) Mango tree

b) Apple tree

c) Wheat plant

d) Oak tree

Correct Answer: Option (c)

Explanation: Monocots are a type of flowering plant that has one cotyledon or seed leaf in their embryos. They also have parallel veins in their leaves and flower parts in multiples of three. Examples of monocots include wheat, rice, corn, and grasses. The mango tree, apple tree, and oak tree are examples of dicot plants, which have two cotyledons in their embryos, net-like veins in their leaves, and flower parts in multiples of four or five.

Thus, the correct answer is option (c).

Difficulty Level- Easy

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q97) Which of the following is an example of carbohydrate-rich food?**

a) Beef steak

b) Eggs

c) Brown rice

d) Olive oil

Correct Answer: Option (c)

Explanation: Carbohydrates are one of the three macronutrients (along with proteins and fats) that provide energy to the body. Brown rice is a complex carbohydrate that contains fibre, vitamins, and minerals, as well as starch that provides energy. Beef steak and eggs are high in protein, while olive oil is high in healthy fats.

Thus, the correct answer is option (c).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q98) Which of the following is a characteristic of organic farming?**

a) Use of synthetic pesticides and fertilizers

b) Emphasis on high crop yields

c) Use of genetically modified crops

d) Emphasis on sustainable farming practices

Correct Answer: Option (d)

Explanation: Emphasis on sustainable farming practices. Organic farming is a method of food production that emphasizes the use of natural fertilizers, crop rotation, and other sustainable practices to maintain soil health and biodiversity. Organic farmers avoid the use of synthetic pesticides and fertilizers, as well as genetically modified crops. They also prioritize animal welfare and may use alternative methods to control pests and diseases.

Thus, the correct answer is option (d).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q99) Which of the following is a protein-rich vegetarian food?**

a) Tofu

b) Brown rice

c) Sweet potatoes

d) Broccoli

Correct Answer: Option (a)

Explanation: Tofu, also known as bean curd, is a plant-based protein source made from soybeans. It is a versatile ingredient that can be used in a variety of dishes, and it is also a good source of calcium and iron. Brown rice, sweet potatoes, and broccoli are all healthy foods, but they are not as high in protein as tofu.

Thus, the correct answer is option (a).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q100) What is the function of the pancreas in the digestive system?**

a) Producing bile

b) Storing bile

c) Producing insulin

d) Absorbing nutrients

Correct Answer: Option (c)

Explanation: The pancreas is a glandular organ located behind the stomach that plays a critical role in the digestive and endocrine systems. It produces digestive enzymes that help to break down food in the small intestine, but its primary endocrine function is to produce hormones such as insulin and glucagon that regulate blood sugar levels. Bile is produced by the liver and stored in the gallbladder, while nutrient absorption primarily occurs in the small intestine.

Thus, the correct answer is option (c).

Difficulty Level- Medium

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q101) What is the process of converting milk into curd called?**

a) Fermentation

b) Coagulation

c) Pasteurization

d) Homogenization

Correct Answer: Option (a)

Explanation: Fermentation is the process of converting lactose, the primary sugar in milk, into lactic acid by the action of lactic acid bacteria. This process makes the milk thicker and sour and transforms it into curd. Coagulation is the process of separating the solid curd from the liquid whey in milk. Pasteurization is a process of heating milk to kill harmful bacteria, while homogenization is a process of breaking down fat globules in milk to make it more uniform.

Thus, the correct answer is option (a).

Difficulty Level- Medium

Bloom’s Taxonomy- Evaluate

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q102) Answer the following question with reference to the audio**

[**https://drive.google.com/file/d/16k54Rio7RFQtU2N\_\_hl7jUHgYSqXxj-M/view?usp=share\_link**](https://drive.google.com/file/d/16k54Rio7RFQtU2N__hl7jUHgYSqXxj-M/view?usp=share_link)

**TYPE: Audio**

**Which of the following is NOT a method of cooking food?**

a) Boiling

b) Roasting

c) Grilling

d) Freezing

Correct Answer: Option (d)

Explanation: Freezing is not a method of cooking food but a method of preserving it. Boiling involves cooking food in hot water, while roasting involves cooking food in an oven or over an open flame. Grilling involves cooking food over a direct heat source, such as charcoal or gas. Freezing involves storing food at a low temperature to prevent spoilage.

Thus, the correct answer is option (d).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q103) Which of the following is NOT a function of carbohydrates in the body?**

a) Providing energy

b) Building and repairing tissues

c) Regulating metabolic processes

d) Supporting the immune system

Correct Answer: Option (d)

Explanation: Carbohydrates are a source of energy for the body and are essential for building and repairing tissues. They also play a role in regulating metabolic processes such as blood sugar levels. However, they do not have a direct role in supporting the immune system, although a balanced diet that includes carbohydrates can help to maintain overall health and support the immune system indirectly.

Thus, the correct answer is option (d).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q104) Which of the following is a source of complete protein?**

a) Rice

b) Lentils

c) Milk

d) Bread

Correct Answer: Option (c)

Explanation: Complete proteins contain all nine essential amino acids that the body needs to build and repair tissues. Animal products such as meat, fish, eggs, and dairy are sources of complete proteins. Milk is a complete protein as it contains all the essential amino acids. Rice, lentils, and bread are incomplete proteins as they do not contain all the essential amino acids in sufficient quantities. However, combining different incomplete protein sources can provide all the essential amino acids the body needs.

Thus, the correct answer is option (c).

Difficulty Level- Medium

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q105) Which of the following is NOT a primary function of carbohydrates in the human body?**

a) Providing energy

b) Regulating metabolism

c) Supporting growth and development

d) Aiding in digestion

Correct Answer: Option (d)

Explanation: Carbohydrates are one of the three macronutrients that are essential for the human body, and their primary function is to provide energy for various cellular processes. Carbohydrates also play a role in regulating metabolism and supporting growth and development, but they do not aid in digestion. Fibre, which is a type of carbohydrate, can help to promote digestion by adding bulk to the stool and regulating bowel movements.

Thus, the correct answer is option (d).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q106) Which of the following is NOT a method of soil conservation?**

a) Crop rotation

b) Terracing

c) Deforestation

d) Contour ploughing

Correct Answer: Option (c)

Explanation: Soil conservation refers to practices that help to prevent soil erosion and maintain soil fertility for agricultural purposes. Methods of soil conservation include crop rotation, which involves alternating crops in a particular field to prevent soil depletion; terracing, which involves creating steps or ridges on a slope to prevent water runoff and erosion; and contour ploughing, which involves ploughing along the contour lines of a field to prevent water runoff. Deforestation, on the other hand, is a destructive practice that can lead to soil erosion and loss of biodiversity.

Thus, the correct answer is option (c).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q107) Which of the following is an example of a complete protein?**

a) Rice

b) Beans

c) Milk

d) Bread

Correct Answer: Option (c)

Explanation: A complete protein is a protein source that contains all nine essential amino acids that the human body cannot produce on its own. Animal-based protein sources such as milk, meat, and eggs are typically complete proteins, whereas plant-based protein sources such as rice, beans, and bread are incomplete proteins that may need to be combined with other protein sources to provide all nine essential amino acids.

Thus, the correct answer is option (c).

Difficulty Level- Medium

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q108) Which of the following is a disadvantage of using chemical fertilizers in agriculture?**

a) They are expensive to produce

b) They can lead to soil depletion

c) They do not improve crop yield

d) They are not effective in controlling pests

Correct Answer: Option (b)

Explanation: Chemical fertilizers are commonly used in modern agriculture to provide plants with essential nutrients such as nitrogen, phosphorus, and potassium. However, overuse of chemical fertilizers can lead to soil depletion, which occurs when the soil becomes less fertile and loses its ability to support plant growth. This is because chemical fertilizers do not replenish the organic matter and microorganisms in the soil that are necessary for long-term soil health. Additionally, the excessive use of chemical fertilizers can lead to environmental pollution, as they can leach into groundwater and harm aquatic ecosystems.

Thus, the correct answer is option (b).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q109) Which of the following is NOT an example of a complete protein?**

a) Meat

b) Eggs

c) Beans

d) Rice

Correct Answer: Option (d)

Explanation: Complete proteins contain all the essential amino acids that the body needs to build and repair tissues. Meat, eggs, and beans are all examples of complete proteins, while rice is an incomplete protein that is low in some essential amino acids.

Thus, the correct answer is option (d).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q110) Which of the following is NOT a type of foodborne illness?**

a) Salmonella

b) E. coli

c) Staphylococcus

d) Influenza

Correct Answer: Option (d)

Explanation: Influenza is a respiratory illness caused by a virus and is not a type of foodborne illness. Salmonella, E. coli, and Staphylococcus are all types of bacteria that can cause foodborne illness if food is contaminated with them.

Thus, the correct answer is option (d).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q111) Which of the following is NOT a factor that affects the yield of a crop?**

a) Soil type

b) Climate

c) Seed quality

d) Plant age

Correct Answer: Option (d)

Explanation: While plant age can affect the quality of the crop, it is not a primary factor that affects the yield. Soil type, climate, and seed quality are all important factors that can affect the yield of a crop. Soil type can affect the nutrient content of the soil and how well the plants can grow, while climate can affect the amount of sunlight, rainfall, and temperature that the plants receive. Seed quality can affect how well the plants germinate and grow.

Thus, the correct answer is option (d).

Difficulty Level- Medium

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q112) Which of the following is NOT a factor that affects the growth of microorganisms in food?**

a) Temperature

b) Moisture

c) Oxygen

d) Salt content

Correct Answer: Option (d)

Explanation: Salt is often used as a preservative because it can inhibit the growth of certain microorganisms, but it is not a factor that affects the growth of all microorganisms. Temperature, moisture, and oxygen are all important factors that can influence the growth of microorganisms in food.

Thus, the correct answer is option (d).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q113) Answer the following question with reference to the audio**

[**https://drive.google.com/file/d/1l-Kjj8fWEMwnvH9m-XCU-9W5yhIWfZTs/view?usp=share\_link**](https://drive.google.com/file/d/1l-Kjj8fWEMwnvH9m-XCU-9W5yhIWfZTs/view?usp=share_link)

**TYPE: Audio**

**What is the role of bile in the digestive system?**

a) Breaking down fats

b) Absorbing nutrients

c) Killing bacteria

d) Regulating blood sugar

Correct Answer: Option (a)

Explanation: Bile is a greenish-yellow fluid produced by the liver and stored in the gallbladder. It helps to emulsify or break down fats in the small intestine, making them easier to digest and absorb. Bile does not play a role in absorbing nutrients, killing bacteria, or regulating blood sugar.

Thus, the correct answer is option (a).

Difficulty Level- Medium

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q114) Which of the following is a method of soil conservation?**

a) Crop rotation

b) Deforestation

c) Overgrazing

d) Monoculture

Correct Answer: Option (a)

Explanation: Crop rotation is a method of soil conservation in which different crops are planted in a specific sequence in a given field over time. This helps to maintain soil fertility, reduce soil erosion, and control pests and diseases. Deforestation, overgrazing, and monoculture can all have negative impacts on soil quality and lead to soil degradation.

Thus, the correct answer is option (a).

Difficulty Level- Medium

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q115) Which of the following is a common method of food processing?**

a) Fermentation

b) Photosynthesis

c) Respiration

d) Transpiration

Correct Answer: Option (a)

Explanation: Fermentation is a process in which microorganisms, such as yeast or bacteria, convert sugars in food into alcohol or organic acids. This process is commonly used in the production of bread, cheese, yogurt, and alcoholic beverages. Photosynthesis, respiration, and transpiration are all processes that occur in plants and are not methods of food processing.

Thus, the correct answer is option (a).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q116) Which of the following is NOT a source of carbohydrates?**

a) Bread

b) Potatoes

c) Fish

d) Rice

Correct Answer: Option (c)

Explanation: Carbohydrates are a macronutrient that provides the body with energy. They can be found in foods such as bread, potatoes, rice, fruits, and vegetables. Fish, on the other hand, is a source of protein, not carbohydrates.

Thus, the correct answer is option (c).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q117) Which of the following is NOT a type of soil?**

a) Sandy soil

b) Loamy soil

c) Clayey soil

d) Alkaline soil

Correct Answer: Option (d)

Explanation: Alkaline soil is not a type of soil, but rather a soil condition in which the pH level is higher than 7. The three main types of soil are sandy, loamy, and clayey. Sandy soil has large particles and poor water retention, while clayey soil has small particles and good water retention. Loamy soil is a combination of both sandy and clayey soil and has good drainage and water retention.

Thus, the correct answer is option (d).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q118) What is the function of the small intestine in the digestive system?**

a) Absorbing nutrients

b) Breaking down food

c) Storing waste

d) Producing digestive juices

Correct Answer: Option (a)

Explanation: The small intestine is a long, narrow tube that is part of the digestive system. It is responsible for the majority of nutrient absorption in the body, as the walls of the small intestine are lined with tiny finger-like projections called villi, which increase the surface area available for nutrient absorption. The small intestine does not break down food or store waste, but it does receive digestive juices from the pancreas and liver to aid in the absorption of nutrients.

Thus, the correct answer is option (a).

Difficulty Level- Medium

Bloom’s Taxonomy- Remember

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q119) Which of the following is a method of sustainable farming?**

a) Clearing large areas of forest for farming

b) Using chemical fertilizers and pesticides

c) Rotating crops to maintain soil health

d) Overgrazing on grasslands

Correct Answer: Option (c)

Explanation: Sustainable farming is a method of farming that aims to protect the environment, preserve natural resources, and support local communities. This can involve practices such as reducing waste, conserving water, and using renewable energy sources. Rotating crops is a sustainable farming practice that involves planting different crops in different fields each year, which can help to maintain soil health and prevent the build-up of pests and diseases. Clearing large areas of forest for farming, using chemical fertilizers and pesticides, and overgrazing on grasslands are all unsustainable farming practices that can have negative environmental impacts.

Thus, the correct answer is option (c).

Difficulty Level- Medium

Bloom’s Taxonomy- Analyze

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**

**Q120) Which of the following is a disadvantage of monoculture farming?**

a) Increased soil erosion

b) Higher crop yields

c) Reduced use of pesticides

d) Increased biodiversity

Correct Answer: Option (a)

Explanation: Monoculture farming is a type of farming that involves growing a single crop on a large area of land, year after year. While monoculture farming can lead to higher crop yields and easier management, it can also have negative environmental impacts. One of the main disadvantages of monoculture farming is increased soil erosion, as the constant cultivation of a single crop can deplete the soil of nutrients and reduce its ability to hold onto water. This can lead to soil erosion and loss of topsoil, which can have long-term negative effects on soil health and agricultural productivity. Other disadvantages of monoculture farming include increased use of pesticides and herbicides, decreased biodiversity, and increased risk of crop failure due to pests and diseases.

Thus, the correct answer is option (a).

Difficulty Level- Hard

Bloom’s Taxonomy- Understand

**$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$**