TSD

"EDUCATE, ELEVATE, EMPOWER"

SCIENCE

2025

Grade 7& 8

Q 1 : Insectivorous plants feed on insects for which nutrient?

A. Nitrogen B. Oxygen

C. Hydrogen D. Carbon dioxide

Q 2 : Litchen is the symbiotic relation between algae and ----------

A. Protozoa B. Virus

C. Fungi D. algae

Q 3 : Which tissue in the plant is responsible for transporting water upwards, even against gravity, in tall trees?

A. Xylem B. Phloem

C. Parenchyma D. Colenchyma

Q 4 : The main function of “lenticels” in the stem of plants is to _____.

A. Absorb water B. Exchange gases

C. Conduct nutrients D. Store food

Q 5 : Which part of the plant plays the primary role in “photosynthesis” by converting light energy into chemical energy?

A. Roots B. Stems C. Leaves D. Flowers

Q 6 : In plants, the stomata in the leaves help in the process of _____.

A. Absorption of water B. Release of oxygen

C. Exchange of gases D. Storage of food

Q 7 : The “root cap” of a plant serves mainly to _____.

A. Protect the growing root tip from damage

B. Store starch

C. Absorb minerals and water

D. Anchor the plant in the soil

Q 8 : The primary role of the “cortex” in plant roots is to _____.

A. Transport water and minerals

B. Store food and water

C. Conduct photosynthesis

D. Protect the root tip

Q 9 : Which of the following is directly involved in water transport and nutrient absorption in a plant?

A. Xylem B. Phloem

C. Root hairs D. Guard cells

Q 10 : Which part of the plant is responsible for the growth of new tissues at the tip, enabling the plant to grow taller and spread wider?

A. Apical meristem B. Root cap

C. Phloem D. Stomata

Q 11 : Which of the following is an example of “camouflage” as an adaptation for survival?

A. A polar bear’s white fur in snow

B. A camel’s long legs in the desert

C. An eagle’s sharp vision in the sky

D. A snake’s venomous bite

Q 12 : The long, thin leaves of cacti in the desert are adaptations to _____

A. Increase surface area for photosynthesis

B. Reduce water loss through transpiration

C. Attract pollinators

D. Provide shade to the roots

Q 13 : In the Arctic, animals such as seals have a thick layer of fat beneath their skin to _____

A. Store food for the winter

B. Insulate the body against cold temperatures

C. Provide buoyancy in water

D. Enhance movement in the snow

Q 14 : The “large ears” of a desert fox are an adaptation to _____

A. Help in locating prey

B. Enhance hearing ability in the desert

C. Regulate body temperature by releasing heat

D. Provide protection from predators

Q 15 : Aquatic plants in lakes and rivers have _____ roots to help them stay anchored and absorb nutrients.

A. Shallow B. Deep C. Strong D. Non-branching

Q 16 : The webbed feet of ducks are an adaptation that help them _____

A. Fly easily through the air B. Walk on land without slipping

C. Swim efficiently in water D. Climb trees easily

Q 17 : The ability of some fish to breathe in both water and air is due to their _____

A. Lungs B. Gills

C. Swim bladders D. Modified fins

Q 18 : In temperate forests, animals such as squirrels store food in the form of _____ to survive winter months.

A. Seeds B. Fat C. Water D. Excess sugar

Q 19 : In a food chain, the energy flow starts from _____.

A. The producer B. The herbivore

C. The carnivore D. The decomposer

Q 20 : Which of the following best describes a “secondary consumer” in a food chain?

A. A herbivore that feeds on plants

B. A producer that makes its own food

C. A carnivore that feeds on herbivores

D. A decomposer that breaks down dead material

Q 21 : In a food chain, decomposers play an important role in _____.

A. Producing energy

B. Consuming primary consumers

C. Breaking down organic matter

D. Providing food to herbivores

Q 22 : What happens when a top predator in a food chain is removed from the ecosystem?

A. The number of herbivores may increase

B. The producer population decreases

C. Decomposers become more abundant

D. The secondary consumers increase

Q 23 : Which of the following organisms would be considered a “tertiary consumer” in a food chain?

A. A rabbit eating grass B. A fox eating a rabbit

C. A lion eating a zebra D. A hawk eating a snake

Q 24 : A food chain shows the flow of energy from one organism to another. Which level would the "grass" occupy in the following chain: Grass → Rabbit → Fox?

A. Producer
B. Primary consumer
C. Secondary consumer
D. Tertiary consumer

Q 25 : In a food web, the direction of the arrows represents _____.

A. The growth of each organism
B. Energy flow in the ecosystem
C. Organisms' migration patterns
D. The reproduction of organisms

Q 26 : Which of the following is not a feature of a food chain?

A. Energy flows in one direction only
B. Decomposers are always involved
C. The producers are at the top of the chain
D. A sequence of organisms, each dependent on the next as a food source

Q 27 : A group of organisms that can interbreed and produce fertile offspring is classified as _____.

A. A genus
B. A population
C. A species
D. A family

Q 28 : The ability of two organisms to interbreed and produce offspring that can also reproduce indicates _____.

A. Reproductive isolation
B. Genetic drift
C. Species continuity
D. Species identity

Q 29 : Genetic diversity within a species leads to _____.

A. Lower chances of survival

B. Higher resistance to diseases

C. Reduced mating opportunities

D. Complete isolation

Q 30 : A population of wolves in a particular forest that can interbreed with each other represents a _____.

A. Community B. Family

C. Genus D. Species

Q 31 : Geographic isolation of species often leads to the formation of new species through _____.

A. Mutation B. Speciation

C. Exaptation D. Adaptation

Q 32 : The process through which new species arise from existing species is called

A. Evolution B. Speciation

C. Genetic drift D. Selective pressure

Q 33 : Species A and Species B live in the same area but do not interbreed due to behavioral differences. This is an example of _____.

A. Geographic isolation B. Behavioral isolation

C. Mechanical isolation D. Temporal isolation

Q 34 : Two organisms belonging to different species cannot produce viable offspring due to differences in reproductive organs. This is an example of _____.

A. Reproductive isolation B. Genetic drift

C. Behavioral adaptation D. Environmental adaptation

Q 35 : The primary cause of ozone depletion is _____.

A. Excessive nitrogen oxide release

B. CFCs and halons

C. Carbon dioxide emissions

D. Carbon monoxide emissions

Q 36 : Which of the following is a direct effect of ozone depletion?

A. Increase in global temperatures

B. Increased UV radiation reaching the Earth's surface

C. Decrease in air quality

D. Faster plant growth

Q 37 : The Montreal Protocol, an international treaty, aims to reduce _____.

A. CO2 emissions B. Chlorofluorocarbon (CFC) production

C. Particulate matter pollution D. Deforestation

Q 38 : Ozone depletion is most pronounced in _____.

A. The tropical regions B. The equator

C. The polar regions D. The temperate zones

Q 39 : Which of the following gases contribute to ozone layer depletion?

A. H_2O and CO_2

B. Chlorofluorocarbons (CFCs) and Nitrous oxide

C. Methane and Sulfur dioxide

D. Carbon dioxide and Nitrogen

Q 40 : The increase in UV radiation due to ozone layer depletion can cause _____.

A. Skin cancer and cataracts

B. Improved human immune systems

C. Increase in crop yields

D. Reduction in ocean temperatures

Q 41 : Ozone depletion primarily affects which layer of the atmosphere?

A. Troposphere B. Stratosphere

C. Exosphere D. Thermosphere

Q 42 : Which of the following actions can help reduce ozone depletion?

A. Reducing the use of CFC-containing products

B. Reducing the use of fossil fuels

C. Planting more trees

D. Using alternative energy sources

Q 43 : Which of the following changes occur when a gas is compressed into a smaller volume?

A. The gas particles move slower

B. The gas particles move faster

C. The volume of the gas increases

D. The temperature decreases

Q 44 : In the process of sublimation, a substance changes from _____.

A. Solid to gas B. Gas to solid

C. Liquid to gas D. Solid to liquid

Q 45 : The arrangement of particles in a liquid is best described as _____.

A. Highly ordered and rigid

B. Ordered but not fixed

C. Scattered and moving freely

D. Relatively close and can move past each other

Q 46 : When a solid is heated, it changes into a liquid. This process is known as _____.

A. Evaporation B. Condensation

C. Fusion D. Sublimation

Q 47 : The change of a liquid into a gas at its boiling point is called _____.

A. Condensation B. Vaporization

C. Freezing D. Sublimation

Q 48 : Which of the following best explains why gases have no definite shape or volume?

A. The particles are closely packed together

B. There are strong forces of attraction between the particles

C. Particles are far apart and move freely

D. The particles are tightly bound in a structure

Q 49 : Which of the following is a characteristic property of solids?

A. High compressibility

B. Fixed shape and volume

C. Indefinite shape and volume

D. Particles move freely and are far apart

Q 50 : In a liquid, the particles can move past each other but are still attracted to each other. This is why liquids have _____.

A. No volume B. Fixed shape

C. Definite volume but no fixed shape

D. High compressibility

Q 51 : The removal of a top predator in a food chain can cause an increase in _____.

A. The population of herbivores B. The number of producers

C. Decomposition rates D. Secondary consumer populations

Q 52 : A sudden increase in the number of herbivores in an ecosystem can lead to _____.

A. Overgrazing and depletion of plant resources

B. Increased decomposition rates

C. Biodiversity stabilization

D. Reduction in predator populations

Q 53 : The biomagnification effect in a food chain leads to _____.

A. Lower concentration of toxins at higher trophic levels

B. Accumulation of toxins at lower trophic levels

C. An increase in the number of producers

D. A decrease in the energy available at each trophic level

Q 54 : When an apex predator is removed from a food chain, the _____.

A. Balance of the ecosystem is disrupted

B. Number of producers increases

C. The number of herbivores decreases

D. Energy flow in the ecosystem is unaffected

Q 55 : In a food web, the loss of one species can affect _____.

A. Only the species that directly depend on it

B. Only the producers

C. The entire ecosystem, as all organisms are interconnected

D. None of the above

Q 56 : A decrease in the population of primary producers in a food chain would lead to _____.

A. A decrease in secondary consumers

B. A decrease in tertiary consumers

C. An increase in herbivores

D. A decrease in oxygen production

Q 57 : What happens when a species at the base of the food chain is overharvested?

A. The entire food chain collapses

B. Herbivores suffer from lack of food, affecting higher trophic levels

C. Only the predator populations are affected

D. There is no significant effect on the food chain

Q 58 : Changes in a food chain can lead to a shift in the _____.

A. Species diversity and ecosystem stability

B. Number of decomposers

C. Temperature of the environment

D. Shape of the ecosystem

Q 59 : Which organelle is responsible for energy production in the cell?

A. Nucleus B. Mitochondria

C. Endoplasmic reticulum D. Chloroplast

Q 60 : The basic structural and functional unit of all living organisms is _____.

A. Cell Membrane B. Organelle

C. Cell D. Nucleus

Q 61 : In multicellular organisms, the cells are organized into _____.

A. Organs B. Tissues

C. Organ systems D. Organisms

Q 62 : Which of the following is not found in animal cells?

A. Chloroplast B. Cell membrane

C. Mitochondria D. Nucleus

Q 63 : What is the primary function of the cell wall in plant cells?

A. Protection and structural support

B. Photosynthesis

C. Regulating cell transport

D. Production of ribosomes

Q 64 : The process by which a cell divides to form two identical daughter cells is called _____.

A. Mitosis B. Meiosis C. Growth D. Replication

Q 65 : Which structure regulates the entry and exit of substances in a cell?

A. Nucleus B. Cell wall

C. Cell membrane D. Chloroplast

Q 66 : A group of cells performing a specific function is called _____.

A. Tissues B. Organs

C. Organ systems D. Organisms

Q 67 : The phylum Arthropoda includes animals that have _____.

A. Backbones and scales B. Exoskeletons and jointed limbs

C. Feathers and wings D. A notochord and vertebral column

Q 68 : Which of the following statements is true for all vertebrates?

A. They all have a segmented body structure

B. They all have an exoskeleton

C. They all have an internal skeleton made of bones or cartilage

D. They all have bilateral symmetry

Q 69 : An animal that exhibits radial symmetry, lacks a brain, and is typically marine would most likely belong to the phylum _____.

A. Cnidaria B. Annelida

C. Echinodermata D. Porifera

Q 70 : Among the following, which group of animals has members with three distinct body regions: head, thorax, and abdomen?

A. Amphibians B. Arthropods

C. Reptiles D. Mollusks

Q 71 : The presence of a notochord, gill slits, and a post-anal tail during some stage of development are characteristics of animals in the phylum _____.

A. Chordata B. Mollusca

C. Annelida D. Echinodermata

Q 72 : The primary feature distinguishing amphibians from reptiles is that amphibians _____.

A. Have a tough, scaly skin

B. Can live both in water and on land

C. Lay eggs on land and undergo metamorphosis

D. Are cold-blooded and live in aquatic habitats

Q 73 : The kingdom Animalia is primarily divided into two major groups: _____.

A. Vertebrates and Invertebrates

B. Herbivores and Carnivores

C. Producers and Consumers

D. Omnivores and Detritivores

Q 74 : Insects are classified as arthropods because they have _____.

A. Segmented bodies and exoskeletons

B. Internal skeletons and jointed limbs

C. No legs and external respiration systems

D. Scaly bodies and vertebrae

Q 75 : A ball rolling on the ground eventually stops due to _____.

A. Gravitational force B. Centripetal force

C. Air resistance D. Friction

Q 76 : Newton's first law of motion states that an object will remain at rest or in motion unless acted upon by _____.

A. Gravity B. An external force

C. Friction D. Air pressure

Q 77 : The rate of change of velocity of an object is known as _____.

A. Displacement B. Acceleration

C. Speed D. Momentum

Q 78 : An object with a mass of 10 kg accelerates at 5 m/s^2. The net force acting on the object is _____.

A. 2 N B. 15 N

C. 20 N D. 50 N

Q 79 : When a rocket launches upward, the force that pushes it into the air is caused by _____.

A. Gravity pulling it down

B. The thrust from gases moving downward

C. Friction with the atmosphere

D. Magnetic fields

Q 80 : Two forces of 5 N and 10 N act on an object in opposite directions. The net force acting on the object is _____.

A. 15 N B. 10 N C. 5 N D. Zero

Q 81 : A car traveling in a circular path at a constant speed experiences _____ force that keeps it moving in the circle.

A. Gravitational B. Centrifugal

C. Centripetal D. Normal

Q 82 : Pushing harder on an object causes it to accelerate more because _____.

A. It reduces the object's friction

B. The net force acting on it increases

C. It reduces the object's mass

D. The force of gravity decreases

Q 83 : Deforestation can lead to a significant increase in _____.

A. Carbon dioxide levels in the atmosphere

B. Oxygen production

C. Soil fertility

D. Plant biodiversity

Q 84 : Burning fossil fuels releases _____, which contributes to global warming.

A. Oxygen B. Carbon monoxide

C. Nitrogen gas D. Carbon dioxide

Q 85 : How does excessive use of fertilizers affect aquatic ecosystems?

A. It increases oxygen levels B. It promotes plant diversity

C. It causes eutrophication D. It prevents water pollution

Q 86 : Human activities such as mining and construction often cause _____.

A. Improvement in soil quality B. Increased biodiversity

C. Air and water pollution D. Better crop yield

Q 87 : Overfishing can lead to _____ in marine ecosystems.

A. An increase in aquatic plant growth

B. A balanced food chain

C. A collapse of fish populations

D. A reduction in pollution

Q 88 : The release of chlorofluorocarbons (CFCs) primarily damages the _____.

A. Greenhouse gases B. Forests

C. Ocean currents D. Ozone layer

Q 89 : Excessive cutting of trees reduces rainfall in an area because _____.

A. More carbon dioxide is absorbed

B. The water cycle is disrupted

C. Wind currents increase

D. The ozone layer weakens

Q 90 : Which human activity is the main cause of acid rain formation?

B.

A. Burning of fossil fuels B. Deforestation

D.

C. Plastic waste accumulation D. Construction of dams

Q 91 : The gas released during photosynthesis is _____.

A. Carbon dioxide Oxygen

C. Nitrogen Hydrogen

Q 92 : Chlorophyll absorbs sunlight most effectively in which regions of the light spectrum?

A. Red and blue B. Yellow and green

C. Orange and yellow D. Green and infrared

Q 93 : The main purpose of stomata in photosynthesis is to _____.

A. Absorb sunlight B. Release oxygen

C. Transport water D. Exchange gases

Q 94 : What would happen to photosynthesis if there were no chlorophyll?

A. The plant would produce more oxygen

B. Photosynthesis would stop

C. The plant would store more glucose

D. The stomata would close permanently

Q 95 : The light-dependent reactions of photosynthesis take place in the _____.

A. Cytoplasm B. Stroma

C. Thylakoid membranes D. Roots

Q 96 : Glucose produced during photosynthesis is primarily stored in plants as _____.

A. Starch B. Protein

C. Fat D. Fiber

Q 97 : Why do plants appear green to the human eye?

A. They reflect red light B. They absorb green light

C. They reflect green light D. They transmit blue light

Q 98 : The source of oxygen released during photosynthesis is _____.

A. Carbon dioxide Water

C. Glucose Nitrogen

Q 99 : The fusion of one male gamete with the egg cell and the other male gamete with the polar nuclei is known as _____.

A. Single fertilization
B. Gametogenesis
C. Syngamy
D. Double fertilization

Q 100 : A flowering plant that produces seeds but not fruits most likely undergoes _____.

A. Cross-pollination
B. Self-pollination
C. Fertilization without ovary development reproduction
D. Vegetative

Q 101 : What will happen if the pollen tube fails to reach the ovule?

A. No fruit will form but seeds develop
B. Fertilization will not occur
C. Embryo will develop without endosperm
D. The ovule will turn into a fruit

Q 102 : Endosperm formation in flowering plants occurs as a result of _____.

A. Fusion of one male gamete with the egg cell
B. Fusion of polar nuclei with a sperm nucleus
C. Fusion of two zygotes
D. Fusion of male gametes with two ovules

Q 103 : The process of “self-incompatibility”in flowering plants prevents _____.

A. Production of seeds
B. Pollen germination on a different flower
C. Fertilization by pollen from the same flower
D. Double fertilization

Q 104 : Which of the following adaptations increases the chances of cross-pollination in plants?

A. Small, dull flowers that produce no nectar

B. Pollen grains being large and heavy

C. Stamens and stigmas maturing at different times

D. Ovary producing fewer ovules

Q 105 : Why is the micropyle important for seed development?

A. It helps in pollination

B. It allows water and air to enter the seed

C. It facilitates pollen tube growth

D. It nourishes the embryo

Q 106 : In flowering plants, after fertilization, the integuments of the ovule develop into _____.

A. The fruit wall B. The seed coat

C. The endosperm D. The cotyledons

Q 107 : Decomposers play a critical role in ecosystems because they _____.

A. Release stored nutrients back into the soil

B. Absorb energy from dead organisms and pass it to herbivores

C. Convert energy into oxygen through decomposition

D. Break down pollutants into fossil fuels

Q 108 : In the absence of decomposers, which process in the nutrient cycle would be disrupted first?

A. Carbon fixation in plants

B. Release of carbon dioxide during respiration

C. Conversion of organic matter into inorganic nutrients

D. Absorption of water by roots

Q 109 : Fungi and bacteria act as decomposers because they _____.

A. Directly consume living organisms

B. Perform photosynthesis to produce energy

C. Break down complex organic matter into simpler substances

D. Convert minerals into carbohydrates

Q 110 : Decomposers contribute to the balance of the carbon cycle by _____.

A. Trapping carbon dioxide in plants

B. Releasing carbon dioxide during the breakdown of dead matter

C. Converting carbon dioxide to glucose

D. Absorbing carbon directly from the atmosphere

Q 111 : Which of the following is most likely to occur if decomposers were removed from an ecosystem?

A. Nutrients would accumulate in the atmosphere

B. Dead organic matter would pile up and nutrient cycling would stop

C. Energy transfer between producers and herbivores would increase

D. Plants would produce more oxygen to compensate

Q 112 : How do decomposers indirectly support the growth of producers in an ecosystem?

A. By releasing nitrogen into the atmosphere

B. By converting organic matter into inorganic nutrients absorbed by plants

C. By transferring energy to herbivores

D. By reducing oxygen demand in the soil

Q 113 : Decomposers are essential in preventing the spread of diseases because _____.

A. They eliminate harmful bacteria through photosynthesis

B. They consume pathogens by breaking down dead matter

C. They destroy all organisms in the soil

D. They prevent plants from releasing harmful gases

Q 114 : Why are decomposers like fungi and bacteria considered a part of the final trophic level?

A. They recycle energy to primary consumers

B. They convert inorganic nutrients back into organic forms

C. They break down dead organisms, returning nutrients to the environment

D. They store energy for future trophic levels

Q 115 : Cross-pollination between two flowers of the same plant is known as _____.

A. Self-pollination B. Autogamy

C. Geitonogamy D. Xenogamy

Q 116 : In wind-pollinated flowers, the stigma is typically _____.

A. Sticky and small
B. Large and feathery
C. Brightly colored
D. Enclosed within petals

Q 117 : Which of the following adaptations increases insect pollination efficiency?

A. Production of heavy pollen grains
B. Nectar production and scent
C. Exposed stamens and stigma
D. Small and dull-colored flowers

Q 118 : What happens if the pollen tube does not reach the ovule?

A. The stigma withers away
B. Fertilization fails to occur
C. A fruit develops without seeds
D. The pollen grains produce more gametes

Q 119 : The fertilization in plants primarily involves the fusion of _____.

A. Pollen grain and ovule
B. Male and female gametes
C. Anther and stigma
D. Style and ovary

Q 120 : The process of pollination is different from fertilization because _____.

A. Pollination involves fusion of gametes
B. Pollination is the transfer of pollen
C. Fertilization involves pollen tube formation
D. Pollination is an involuntary process

Q 121 : In fertilization, the pollen tube carries _____ to the ovule.

A. Male gamete
B. Female gamete
C. Embryo
D. Endosperm

Q 122 : After fertilization, the ovary of the flower develops into _____.

A. Fruit B. Seed

C. Pollen D. Ovule

Q 123 : The process in which the male gamete fuses with the female gamete is called ___.

A. Pollination B. Germination

C. Fertilization D. Reproduction

Q 124 : During fertilization, the _____ of the male gamete fuses with the _____ of the female gamete.

A. Cytoplasm, nucleus B. Nucleus, cytoplasm

C. Nucleus, ovule D. Pollen, stigma

Q 125 : In plants, double fertilization results in the formation of _____.

A. Two embryos B. Embryo and endosperm

C. Zygote and pollen tube D. Seed coat and ovule

Q 126 : The first step of fertilization in plants is _____.

A. Germination of the seed

B. Formation of pollen tube

C. Fusion of male and female gametes

D. Transfer of pollen from anther to stigma

Q 127 : The speed of sound increases with the increase in _____.

A. Temperature of the medium B. Density of the medium

C. Frequency of the medium D. Amplitude of the medium

Q 128 : When sound waves pass from air into water, the speed of sound _____.

A. Decreases B. Remains constant

C. Increases D. Becomes zero

Q 129 : In a vacuum, sound _____.

A. Cannot travel B. Travels slower than in air

C. Travels faster than in air

D. Travels at the same speed as in air

Q 130 : The phenomenon of sound reflection is known as _____.

A. Echo B. Refraction

C. Interference D. Resonance

Q 131 : If the frequency of a sound wave is doubled, the wavelength _____.

A. Doubles B. Halves

C. Remains the same D. Quadruples

Q 132 : The unit of frequency is _____.

A. Hertz B. Decibel C. Newton D. Ohm

Q 133 : A sound wave with higher frequency has _____.

A. A higher amplitude B. A longer wavelength

C. A shorter wavelength D. A lower speed

Q 134 : The primary reason why the Earth has seasons is the _____.

A. Change in Earth's distance from the Sun

B. Tilt of the Earth's axis

C. Size of Earth D. Shape of Earth's orbit

Q 135 : Which of the following is the most accurate description of the Earth's rotation?

A. Rotation occurs around the Sun

B. Rotation occurs around the Moon

C. Rotation occurs around the Earth's axis

D. Rotation occurs around the stars

Q 136 : The Earth's atmosphere is mostly made up of _____.

A. Carbon dioxide and nitrogen

B. Carbon dioxide and oxygen

C. Nitrogen and oxygen

D. Argon and oxygen

Q 137 : The Sun's energy reaches the Earth mainly by _____.

A. Conduction B. Convection

C. Radiation D. Refraction

Q 138 : The Earth orbits the Sun in an elliptical path. The point closest to the Sun is called _____.

A. Aphelion B. Perihelion

C. Astronomical unit D. Equinox

Q 139 : The time taken by Earth to complete one rotation on its axis is approximately _____.

A. 24 hours B. 48 hours

C. 12 hours D. 365 days

Q 140 : Which of the following is responsible for the day and night cycle on Earth?

A. Revolution of the Earth

B. Rotation of the Earth

C. Gravitational pull of the Moon

D. Gravitational pull of the Sun

Q 141 : The speed of light in a vacuum is approximately _____.

A. 3 × 10^8 m/s B. 3 × 10^6 m/s

C. 1 × 10^8 m/s D. 3 × 10^7 m/s

Q 142 : The phenomenon in which light bends when it passes from one medium to another is called _____.

A. Reflection B. Refraction

C. Absorption D. Diffraction

Q 143 : Which of the following will NOT affect the speed of light?

A. Medium temperature B. Density of the medium

C. Refractive index of the medium D. Shape of the medium

Q 144 : The angle of incidence is equal to the angle of reflection in _____.

A. Refraction B. Reflection

C. Dispersion D. Absorption

Q 145 : The process in which white light splits into its component colors is known as _____.

A. Reflection B. Refraction

C. Dispersion D. Absorption

Q 146 : A concave lens causes parallel light rays to _____.

A. Converge B. Diverge

C. Refract D. Reflect

Q 147 : Which of the following is the primary reason for the colors in a rainbow?

A. Reflection of light B. Refraction of light

C. Dispersion of light D. Absorption of light

Q 148 : When light passes through a prism, the color with the shortest wavelength is _____.

A. Red B. Violet

C. Yellow D. Blue

Q 149 : Magnetic field lines around a magnet always form _____.

A. Closed loops B. Open curves

C. Straight lines D. Zigzag paths

Q 150 : The force of attraction between two magnets depends on the _____.

A. Distance between them

B. Size of the magnets

C. Magnetic material of the magnets

D. Shape of the magnets

Q 151 : Which of the following materials is NOT magnetic?

A. Nickel B. Iron

C. Copper D. Cobalt

Q 152 : The strength of the magnetic field produced by a current-carrying conductor can be increased by _____.

A. Decreasing the current
B. Using a thicker wire
C. Using a shorter wire
D. Coiling the wire

Q 153 : In an electromagnet, the magnetic field is created by _____.

A. A permanent magnet
B. A current-carrying conductor
C. Magnetic dipoles
D. Static electricity

Q 154 : Which of the following is true about the poles of a magnet?

A. Like poles attract each other
B. Unlike poles repel each other
C. Like poles repel each other
D. Unlike poles attract each other

Q 155 : The Earth's magnetic field is similar to that of a _____.

A. Bar magnet
B. Circular magnet
C. Electromagnet
D. None of the above

Q 156 : Magnetic induction in a material occurs when _____.

A. It is placed in a strong electric field
B. It is exposed to a magnetic field
C. Current is passed through it
D. Heat is applied to it

Q 157 : The carrying capacity of an environment refers to _____.

A. The maximum number of individuals an environment can support without degrading
B. The minimum number of individuals required for survival
C. The rate of growth of the population
D. The total available resources in an ecosystem

Q 158 : Which of the following is a biotic factor affecting population size?

A. Temperature
B. Availability of food
C. Water availability
D. Sunlight

Q 159 : The concept of 'biotic potential' is used to explain the _____.

A. Maximum population size an environment can sustain
B. Intrinsic growth rate of a population
C. Rate of depletion of natural resources
D. Impact of human activity on population size

Q 160 : Which of the following factors can cause a decrease in population size?

A. High birth rates
B. Immigration
C. Increased mortality rate
D. Availability of food

Q 161 : The availability of resources like food, water, and shelter directly affects the _____ of a population.

A. Birth rate
B. Immigration rate
C. Carrying capacity
D. Death rate

Q 162 : Which of these is a density-independent factor that affects population size?

A. Disease predation
B. Weather conditions
C. Availability of food
D. Competition for resources

Q 163 : Human activities such as deforestation can _____ the size of populations in certain ecosystems.

A. Increase B. Have no effect

C. Decrease D. Support

Q 164 : The introduction of an invasive species into a new environment can _____ the local population of native species.

A. Increase its size B. Decrease its size

C. Have no impact D. Increase biodiversity

Q 165 : Which of the following is a renewable energy source?

A. Coal B. Oil C. Wind D. Solar

Q 166 : Non-renewable resources are characterized by _____.

A. They can be reused indefinitely

B. They take millions of years to form

C. They are abundant in nature

D. They are easily replenished

Q 167 : Which of the following is an example of a non-renewable resource?

A. Wind B. Solar energy

C. Natural gas D. Geothermal energy

Q 168 : The main concern with non-renewable resources is that _____.

A. They are renewable if used wisely

B. They are not limited in availability

C. They take a long time to replenish

D. They never run out

Q 169 : Which of the following is NOT a characteristic of renewable resources?

A. Can be replenished naturally

B. Available in infinite quantities

C. Can be used indefinitely

D. Can cause pollution

Q 170 : Geothermal energy is classified as a renewable source because _____.

A. It is derived from the sun

B. It is inexhaustible

C. It is derived from the earth's heat

D. It is readily available from the ocean

Q 171 : Which of the following factors contributes to the depletion of non-renewable resources?

A. Overuse and exploitation

B. Limited availability

C. Climate change

D. All of the above

Q 172 : A major disadvantage of renewable energy sources is that _____.

A. They are expensive to produce

B. They can cause pollution

C. They are highly limited

D. They are weather-dependent

Q 173 : The energy derived from fossil fuels such as coal, oil, and natural gas is considered _____.

A. Environmentally friendly

B. Non-renewable

C. Recyclable

D. Infinite

Q 174 : Which of the following is true regarding wind energy?

A. It is a non-renewable resource

B. It can cause significant environmental pollution

C. It is a renewable resource

D. Wind turbines consume a lot of energy

Q 175 : The speed of light in a vacuum is approximately _____.

A. 300,000 km/s B. 150,000 km/s

C. 500,000 km/s D. 700,000 km/s

Q 176 : Which of the following is the best example of a source of light?

A. Reflected light B. Phosphorescent material

C. Incandescent bulb D. Absorbed light

Q 177 : When light passes from one medium to another, it _____.

A. Reflects completely B. Changes speed and direction

C. Stays unchanged D. Refracts and absorbs energy

Q 178 : Which of these materials allows light to pass through it but also scatters it?

A. Clear glass B. Translucent material

C. Opaque material D. Transparent material

Q 179 : Energy in the form of light is transferred through _____.

A. Vibrations B. Particulate matter

C. Wave-like motions D. High temperatures

Q 180 : Which of the following is an example of light energy being converted into another form of energy?

A. Sunlight heating up water

B. Sunlight producing shadows

C. Light from a bulb making an object glow

D. Light passing through a prism

Q 181 : The phenomenon of light bending as it moves from one medium to another is called _____.

A. Refraction B. Reflection

C. Dispersion D. Diffusion

Q 182 : Which of the following objects would produce the greatest amount of light energy?

A. A glowing firefly B. A heated filament in a light bulb

C. A LED bulb reflecting sunlight D. A burning candle

Q 183 : In a series circuit, if one bulb burns out, the remaining bulbs _____.

A. Continue to glow with reduced brightness

B. Continue to glow with the same brightness

C. Stop glowing

D. Glow brighter

Q 184 : The unit of electric current is _____.

A. Volt B. Ohm C. Watt D. Ampere

Q 185 : Which of the following is true about conductors and insulators?

A. Conductors allow electric current to pass through, insulators do not

B. Conductors do not allow electric current to pass through, insulators do

C. Conductors and insulators both allow electric current to pass through

D. Neither conductors nor insulators allow electric current to pass through

Q 186 : The resistance of a conductor depends on its _____.

A. Material only

B. Length and material only

C. Thickness and length only

D. Length, thickness, and material

Q 187 : When two resistors are connected in parallel, the total resistance is _____.

A. The sum of the individual resistances

B. Less than the smallest individual resistance

C. Equal to the largest individual resistance

D. Equal to the sum of the individual resistances divided by two

Q 188 : The potential difference across a conductor is directly proportional to the _____ flowing through it, according to Ohm's Law.

A. Current

B. Power

C. Resistance

D. Voltage

Q 189 : Which of the following is the correct sequence of components in a simple electrical circuit?

A. Power source, conductor, switch, load

B. Power source, switch, load, conductor

C. Load, conductor, power source, switch

D. Conductor, load, power source, switch

Q 190 : Which of these materials is most likely to be used as an insulator in electrical cables?

A. Copper B. Aluminum

C. Rubber D. Steel

Q 191 : The change in volume of a gas at constant temperature when pressure is applied is described by _____.

A. Thermodynamics law B. Boyle's law

C. Charles's law D. Gay-Lussac's law

Q 192 : If a material has high tensile strength, it means it can _____.

A. Resist stretching or breaking under tension

B. Change shape easily

C. Absorb heat without breaking

D. Resist compression

Q 193 : When matter undergoes a phase transition from gas to solid without becoming liquid, the process is known as _____.

A. Deposition B. Condensation

C. Sublimation D. Precipitation

Q 194 : The rate at which a solid dissolves in a liquid depends on its _____.

A. Solubility coefficient

B. Particle size, temperature, and agitation

C. Viscosity

D. Boiling point

Q 195 : Which of the following explains why gases are highly compressible compared to solids or liquids?

A. The particles are far apart and move freely

B. They have very high intermolecular forces

C. The particles are closely packed together

D. They are less dense than liquids and solids

Q 196 : If a liquid is heated and its volume increases, the _____ of the liquid increases.

A. Density B. Viscosity

C. Compressibility D. Expansion

Q 197 : During an increase in temperature, the kinetic energy of particles in a solid generally causes them to _____.

A. Move more slowly and compress

B. Freely move in all directions

C. Increase in vibration and spread apart

D. Increase in vibration and maintain their positions

Q 198 : The property of matter that allows a substance to return to its original shape after being stretched is known as _____.

A. Ductility B. Elasticity

C. Viscosity D. Plasticity

Q 199 : Which of the following best describes the function of the human respiratory system?

A. It transports oxygen to various organs in the body.

B. It helps in the removal of carbon dioxide from the bloodstream.

C. It pumps blood throughout the body.

D. It regulates body temperature.

Q 200 : The human digestive system is responsible for breaking down food into nutrients. Which of the following organs does NOT play a direct role in digestion?

A. Stomach B. Small intestine

C. Large intestine D. Kidneys

Answers Key

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

Q 136 :	C	Q 165 :	C	Q 194 :	B
Q 137 :	C	Q 166 :	B	Q 195 :	A
Q 138 :	B	Q 167 :	C	Q 196 :	D
Q 139 :	A	Q 168 :	C	Q 197 :	C
Q 140 :	B	Q 169 :	D	Q 198 :	B
Q 141 :	A	Q 170 :	C	Q 199 :	B
Q 142 :	B	Q 171 :	A	Q 200 :	D
Q 143 :	D	Q 172 :	D		
Q 144 :	B	Q 173 :	B		
Q 145 :	C	Q 174 :	C		
Q 146 :	B	Q 175 :	A		
Q 147 :	C	Q 176 :	C		
Q 148 :	B	Q 177 :	B		
Q 149 :	A	Q 178 :	B		
Q 150 :	A	Q 179 :	C		
Q 151 :	C	Q 180 :	A		
Q 152 :	D	Q 181 :	A		
Q 153 :	B	Q 182 :	B		
Q 154 :	D	Q 183 :	C		
Q 155 :	A	Q 184 :	D		
Q 156 :	B	Q 185 :	A		
Q 157 :	A	Q 186 :	D		
Q 158 :	B	Q 187 :	B		
Q 159 :	B	Q 188 :	A		
Q 160 :	C	Q 189 :	A		
Q 161 :	C	Q 190 :	C		
Q 162 :	B	Q 191 :	B		
Q 163 :	C	Q 192 :	A		
Q 164 :	B	Q 193 :	A		

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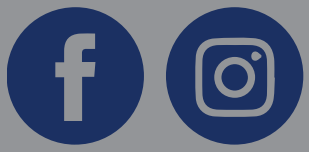

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