BIOLOGY

BOTANY

- Coconut milk factor is: — Cytokinin
- Which element increases the absorption of water and calcium in plants? — Boron
- Which wood will become useless soon after exposing in the open air? — Wet Wood
- The cross-section of a stem of tree has fifty rings. What is the age of the tree? — 50 years
- Onion is a modified form of: — Stem
- The pollination of maize takes place by: — Pollination by air
- The age of trees is determined by its: — growth rings
- Fruits of this plant are found underground: — Groundnut
- Clove, the commonly used spice, is obtained from the: — Flower bud
- Maximum photosynthetic activity occurs in: — Blue and Red region of light
- Where is the Botanical Survey of India headquartered? — Kolkata
- Oxygen liberated during photosynthesis is coming from: — Water
- During photosynthesis the liberated gas is: — Oxygen
- Water in plants is transported by: — Xylem
- Where are the Eucalyptus trees found in abundance? — Nilgiri Hills
- Clove, the commonly-used spice, is obtained from the: — Flower-bud
- Hashish is obtained from a plant. From which part of the plant is it obtained? — Exudates from leaves and female inflorescences
- The chemical used for destroying Fungi in water tanks is: — Copper Sulphate
- The source of oxygen generated during photosynthesis is: — Water
- Which components of light are absorbed by chlorophyll? — Violet and Red
- Ginger is a stem and not a root because: — It has nodes and inter-nodes
- Eyes of potato are useful for: — Vegetative propagation
- What is not a component of chlorophyll? — Calcium
- Carrot is orange in colour because: — It contains carotene
- What is true regarding plant cells and animal cells? — Plant cells contain chloroplast while animal cells do not
- Silk is obtained from: — Saliva of the silk worm
- The seeds of certain plants fall to germinate if they do not pass through the digestive tract of fruit-eating birds. This is due to: — Seed coat impermeability
- Sucrose content in sugarcane decreases: — If frost occurs during the period of ripening
- During photosynthesis green plants absorb: — Carbon dioxide
- Through 'Photosynthesis' green plants generate: — Organic materials
- Ripe grapes contain: — Fructose
- The age of a tree can be determined more or less accurately by: — counting the number of rings in the trunk
- The sweetest sugar is — Fructose
- Maximum harm to a tree is caused by: — loss of all leaves
- Mineral constituent of chlorophyll is: — Magnesium
- Chewing gum is made from: — Latex
- After fertilization the zygote of a seed plant becomes: — Embryo
- The annular and spirally thickened conducting elements generally developed in the protoxylem when the root or stem is: — Differentiating
- Cell elongation in inter-nodal regions of the green plants takes place due to: — Gibberellins
- Phototropic and geotropic movements in plants have been traced to be linked with: — Auxin
- The first case of polyembryony was reported in certain orange seeds by: — Antoni Van Leeuwenhoek
- In a seed plant the microspore gives rise to the: — Pollen grain
- When the concentration of the soil solutes is low, the absorption of water is: — increased
- Nuclear spindle consists of three types of fibres: — interzonal, continuous and discontinuous
- What carries a message from DNA in the nucleus to the ribosomes in the cytoplasm? — m-RNA
- A pine seed has cotyledons and tissue from the: — Female gametophyte
- In a flower, which terminal structure is part of a stamen? — Anther
- Which acid is a derivative of carotenoids? — Abscisic acid
- Phototropic curvature is the result of uneven distribution of: — Auxin
- Which is a gaseous plant hormone? — Ethylene
- Antheridia and Archegonia are sex organs of: — Moss
- In which group would you place a plant which produces seeds but lacks flowers? — Gymnosperms
- In glasshouses (green houses) when plants are kept on artificial light and temperature, the method is called: — phytotron
- Natural cytokinin are synthesized in tissues that are: — dividing rapidly
- With regard to photorespiration in plants, the correct statement is: — It occurs in chloroplasts
- In a plant organ, which is covered by periderm and the stomata are absent, some gaseous exchange still takes place through: — Lenticels
- The carbohydrates synthesized in the leaves are transported through sieve tubes most commonly in the form of: — Sucrose
- Best defined function of Manganese in green plants is: — Photolysis of water

- Stomata open is due to accumulation of: — K
- When pea seeds and wheat grains are soaked in water, pea seeds showed more swelling than the wheat. The reason is: — Imbibitions capacity of proteins is more than that of starch
- Which denotes the water potential of the mesophyll cell in wilted condition? — Equal to the value of osmotic potential
- Which minerals activate the enzymes involved in respiration? — Magnesium and manganese
- The minerals involved in water-splitting reaction during photosynthesis are: — Manganese and Chlorine
- A nutritionally wild type organism, which does not require any additional growth supplement is known as: — Prototroph
- Humidity in atmosphere decreases rate of: — Transpiration
- Guttation is the result of: — Root pressure
- Hydathodes are also called: — water stomata
- The sugarcane Plant has: — dumb bell-shaped guard cells
- If water enters in a cell, the pressure exerted by its swollen protoplast is: — Turgor pressure
- What is the most accepted theory for movement of water through plants? — Cohesion theory
- With an increase in the turgidity of a cell, the wall pressure will: — increase
- Opening and closing of stomata is due to the: — Change in Turgor pressure of guard cells
- Water will be absorbed by root hair when: — concentration of solutes in the cell sap is high
- Little leaf is caused due to the deficiency of: — Zinc
- Mineral salts which are absorbed by the roots from soil are in the form of: — Very dilute solution
- Most plants obtain their nitrogen from the soil in the form of: — Nitrates
- Nitrogen fixing bacteria were discovered by: — Winogradsky
- Non-legume nitrogen fixing organisms belongs to genus: — Franken
- In root nodules of legumes, leg-haemoglobin is important because it: — Acts as an oxygen scavenger
- A rootless aquatic plant in which a portion of the leaf forms a tiny sac for trapping insects, is — Utricularia
- If by radiation all nitrogenase enzymes are inactivated, then there will be no: — Fixation of nitrogen in legumes
- In soil, water available for plants is: — Capillary water
- The ratio between 2-carbon and 3-carbon intermediates having —NH_2 group formed in photosynthetic oxidation cycle is: — 2:1
- In higher plants, continuity of cytoplasm from one cell to its neighbouring cells is established through: — Symplast
- The amount of water held by the soil after drainage is known as: — Field capacity
- Attraction of water molecules to polar surfaces is known as: — Adhesion
- When the conditions are dry, a grass leaf curls inward to minimize water loss due to presence of: — Bulliform cells
- Both photosynthesis and respiration require: — Cytochromes
- Wilting of a plant results from excessive: — transpiration
- The phytohormone, which increases the concentration of potassium in guard cells is also responsible for the induction of: — cell division
- Potometer works on the principle of: — Amount of water absorbed equals the amount transpired
- According to Steward's starch hydrolysis theory, which is the principal reason for the opening of stomata during daytime? — Photosynthetic utilization of CO_2 in guard cells
- Cohesion theory of water movement in plants was put forth by: — Henry Dixon
- Which force is responsible for raising water up to 100 m of tall plants? — Transpiration pull
- The first process by which water enters into the seed coat when a seed is placed in suitable environment for germination is: — Imbibition
- Opening of floral buds into flowers, is a type of: — Autonomic movement of growth
- In a flowering plants megaspore undergoes mitosis and develops into a: — Seed
- The importance of day length in flowering of plants was first shown in: — Tobacco
- The assimilatory power i.e., $NADPH_2$ and ATP are formed in light or: — Hill's reaction
- A fresh water green alga, rich in protein is: — Chlorella
- Compared with the gametophytes of the bryophytes the gametophytes of vascular plants tend to be: — Smaller and to have smaller sex organs
- Differentiation of shoot is controlled by: — High cytokinin : auxin ratio
- Corn and beans are often cited as representative examples of ____, respectively. — Monocots and dicots
- Gymnosperms produce neither flower nor fruit because they do not possess: — Ovary
- In a flower, _____ generally consist of two pollen sacs. — Anthers
- An enzyme that can stimulate germination of barley seeds is: — á-amylase
- Seed dormancy is due to: — Abscisic acid

ZOOLOGY

- Heparin is secreted by: — Mast Cells
- Interdependent genes with related functions form: — A co-adapted gene complex
- The major constituent of vertebrate bone is: — Calcium phosphate
- Animals do not have enzyme systems which enable them to make use of the energy from: — Water
- A clone is a colony of: — cells having similar genetic constitution
- Which of the following is the largest living bird? — Ostrich
- In the case of test tube babies: — embryo is placed in uterus after 2 months

- A rare and endangered animal in Silent Valley is: — Lion-tailed Macaque
- AIDS virus has: — double stranded DNA
- Anglo-Nubian is a breed of: — Goat
- Which blood group is a universal recipient? — AB
- Rod shaped bacteria is called: — Bacillus
- The animal which has become extinct recently in India happens to be: — Cheetah
- All the progeny obtained from a single plant by vegetative propagation are called: — Clones
- What is a Sponge? — An animal
- Which blood group may be present in the children of a couple having blood groups A and B respectively? — A, B and AB
- Who discovered sex hormones? — Eugen Steinach
- Fermentation is a process of decomposition of an organic compound by: — Enzymes
- What are the basic units from which human spare parts can be created? — Stem cells
- Adherent mucoid alkaline substance covering the inner lining of stomach is to: — Prevent the action of pepsin of mucosa
- Which blood cell is compulsory for blood coagulation? — Platelets
- Which was the first antibiotic? — Penicillin
- Virus contains: — Protein and lipid
- How many feet has a crab got? — 8
- The presence of what distinguishes a plant cell from an animal cell? — Chloroplasts
- The hybrid between horse and donkey is called: — Mule
- Yawning occurs: — due to excess concentration of CO_2 in blood
- Which vitamin helps in blood coagulation? — Vitamin-K
- A substance that stimulates the production of antibodies when introduced into a living organism is known as: — Antigen
- 'Darwin finches' refer to a group of: — Birds
- In male sharks, Claspers are found attached to: — Pelvic fin
- The animal which uses sounds as its 'eyes' is: — Bat
- *Taenia sodium* (Tape worm) lives as a parasite in: — Intestine of man/woman
- An ant can see the objects all around it due to the presence of: — Compound eyes
- What is the approximate time required for a heartbeat? — 0.8 second
- Who discovered the Cholera-bacillus? — Robert Koch
- Which animal produces the biggest baby? — Blue Whale
- Heart attack occurs due to: — Lack of blood supply to the heart itself
- Camel is a desert animal that can live without water for many days because: — it does not need much water and water is formed in the body due to oxidation of fat
- The concept of 'survival of the fittest' was first advocated by: — Darwin
- The name of the first cloned sheep was: — Dolly
- Which hormone is released in excess quantity during excitement? — Adrenaline
- Scientific study of birds is known as: — Python
- A non-poisonous snake is — Turtle species
- Olive Ridley is a famous: — Insect
- Lac which is used as sealing wax is produced by:
- The language used in writing the scientific name of animals is: — Latin
- The study of visceral organs is: — Splanchnology
- The branch of biology dealing with the study of cells is known as: — Cytology
- The study of extinct animals is called: — Paleontology
- Johann Gregor Mendel is famous for propounding: — Laws of Heredity
- What is an endoscope? — It is an optical instrument used to see inside the alimentary canal
- Of all micro-organisms, the most adaptable and versatile are: — Viruses
- Which animal is called farmer's friend? — Earthworm
- The term 'gene' was coined by: — W.L. Johannssen
- Dinosaurs were: — reptiles that became extinct
- Sweat glands in mammals are primarily concerned with: — Thermoregulation
- Birds usually have a single: — Ovary
- In which vertebrate oxygenated and deoxygenated blood gets mixed? — Amphibian
- The chemicals released by one species of animals in order to attract the other members of the same species are: — Pheromones
- The colour of cow's milk is slightly yellow due to the presence of: — Carotene
- Animals living in the three trunks are known as: — Arboreal
- Plasma membrane in eukaryotic cells is made up of: — Phospholipids
- What is called the power plants of the cell? — Miochondrion
- What is the chemical name of vinegar? — Acetic acid
- Spermatids derive the nourishment from: — Ciliated epithelial cells
- Oxytocin is secreted by: — pituitary gland
- The protoplasm of the fibres of striated muscle, excluding the myofibrils, is called: — Sarcoplasm
- Guineaworm, Hookworm and Tapeworm are endoparasite, while ringworm is a skin disease caused by: — fungus
- Taste buds located on tongue, are example of: — Exteroreceptors
- Body cells infected with virus produce a protein called: — Interferon
- A disease of arteries in which the wall of arteries become thickened and rigid, and blood flow is hindered– — Arteriosclerosis
- A protein produced by viral infected body cells and some lymphocytes, often in response to presence of doublestranded RNA in the cell? — Interferon
- Capacitation of sperm in mammals involves: — Acrosome reaction

- The only poisonous lizard of the world? — Heloderma
- Which is autosomal dominant abnormalities of the eyes, cardiovascular system and the skeletal system? — Marfan syndrome
- The cytoplasmic segment of striated muscle fibre is termed: — Sarcoplasm
- The polio virus enters the body through: — Contaminated food and water
- Products of adenine and guanine metabolism are excreted by humans as: — Uric acid
- Sensory cells that occur in the pits or canals of lateral line system of fishes are: — Neuromast
- The secretions from which of the following glands form oothecа in cockroach? — Colleterial glands
- The rate and force of the heartbeat, the secretion of digestive glands are controlled by the: — Autonomic nervous system
- The extra embryonic membranes of mammalian embryo are derived from: — Trophoblast
- Lining of human intestine is: — Brush border
- Humans having which group blood, have no blood group antigens, but possess both 'a' and 'b' antibodies? — 'O' group
- Glycosidic bond is broken during digestion of: — Starch
- Passive food ingestion in Amoeba is known as: — Import
- In gout patients, high level of which one of the following is found in blood?: — Uric acid
- The anion present in pancreatic juice is: — Bicarbonate
- Preganglionic sympathetic fibres are: — Cholinergic
- The muscles associated with the heart of insects are: — Alary
- The goblet cells present in the intestinal lining are: — Merocrine
- Chaga's disease is caused by: — Trypanosoma cruzi
- A chemical process common in the digestion of all kinds of food is: — Hydrolysis
- The P-wave of the electrocardiogram is associated with: — Depolarization of atrial muscular tissues
- In mammalian heart, the pulmonary is powered by: — Right atrium and right ventricle
- Dartos tunic muscle fibres occur in: — Scrotal Wall
- Which muscles help urinary bladder to expel urine forcefully? — Detrusor muscle
- During embryonic development in humans, morula is enclosed by: — Zona pellucid
- Milk teeth in a child of 3-4 years do not include: — Molars
- In humans, which brain wave pattern disappears entirely during sleep? — Alpha waves
- T8 cells are related with: — Cytotoxic T cells
- Which part of brain allows one side of brain to control opposite side of body? — Medulla
- Fetuin is found in: — Fetus
- Hensen's body is associated with: — Organ of Corti
- Sensory receptor of warmth located principally at the lip of fingers is known as: — Ruffini's corpuscles
- Negri bodies are associated with: — Rabies
- Schultze's bundle is associated with: — Spinal Cord
- Schlemm's canal is present in: — Eye
- Capsule of Tenon is associated with: — Eyeball

- Ancestral amphibians were tetrapods that evolved during: — Carboniferous period
- The wall of heart is made up of: — Epicardium, Myocardium and Endocardium
- Genetic counsellors can identify heterozygous individuals by: — Screening procedures
- Which enzyme is secreted by intestinal mucosa that remain closely associated with the microvilli? — Peptidase and Disaccharidase
- What is absorbed by intestinal mucosa by active transport? — Galactose and Glucose
- A starving person consumes first: — Stored glycogen
- The functional unit of contractile system in striated muscle is: — Sarcomeres
- Globular proteins undergo structural changes in response to extremes of pH or temperature, is called: — Denaturation
- The study of relationships between size and shape is known as: — Allometry
- A localised tumour covered by connective tissue is called: — Benign Tumor
- Hürthle cell is associated with: — Thyroid gland
- A metastatic cancerous tumour is termed 'sarcoma', if the disorder is in: — Fibroblasts
- Graft between isogenic individuals is known as: — Syngraft
- The most striking example of point mutation is found in a disorder called: — Sickle-cell anaemia
- The spherical structured organelle that contains the genetic material is: — Nucleus
- Protoplasm found inside the nucleus is known as: — Nucleoplasm
- Prokaryotic genetic system has: — DNA but no histones
- Carbohydrates present in the plasmalemma are in the form of: — glycolipids and glycoproteins
- Cell organelles are embedded in: — Cytoplasm
- Cellular totipotency means: — Capability of a plant cell to form complete plant
- Distinction of prokaryotes and eukaryotes is based on: — Nucleus
- In a Golgi complex the structure which is the functional unit is: — Cisternae
- In eubacteria, a cellular component that resembles eukaryotic cell is: — Plasma membrane
- Intact chloroplast from green leaves can be isolated by: — Sucrose solution
- Intracellular compartments do not occur in: — Prokaryotes
- Longest cells in human body are: — nerve cells
- Mitochondria do not occur in which of the following? — Bacteria
- Nuclear matter without envelope occurs in: — Bacteria and Cyanobacteria
- The Golgi apparatus: — Modifies and packages proteins
- Prokaryote is characterized by: — Dispersed DNA and lack of membrane bound organelles, Absence of nuclear envelope and Absence of nucleolus
- The main arena of various types of activities of a cell is: — Cytoplasm
- When a ripe tomato is pricked with a needle a watery fluid comes out. This fluid is stored in: — Vacuole

- Organisms with very high intrinsic growth rates have: — Short generation times
- Mutations which are large and conspicuous are called macro-mutations and those very inconspicuous are called: — Micromutation
- The rate and force of the heart-beat, and the secretion of digestive glands are controlled by: — Autonomic Nervous System
- Mammillary bodies are attached to the ventral side of: — Diencephalon
- Sweating on palm and sole due to psychic stimuli is called: — Cold sweat
- Inherited Rh gene is found in: — Breadykinin
- The 'soft spot' on the top of an infant's skull is called: — Fontanel
- Concentration of carbonic acid does not increase in blood due to the presence of: — Na
- Staph food poisoning is related with: — Staphylococcus bacteria
- Enzymes promote chemical reaction by: — Reducing the activation energies
- The modification of hind pair of wings into halteres is the characteristic of: — Diptera
- A molecule of ATP is structurally similar to a molecule of: — RNA molecule
- Class Trematoda belongs to the phylum: — Platyhelminthes
- Albinism is caused due to lack of production of: — Tyrosine 3-monooxygenase
- Maximum power of division is found in the skin layer: — Stratum malpigh
- Tube feet are characteristic of: — Star Fish
- Acetylcholine is responsible for transmission of nerve impulses through: — Synapses
- Loss of ability to speak due to defect of vocal organs is called: — Alalia
- Termination of amino acid chain requires codons: — UAG, UAA, UGA
- 'A tube within a tube' body plan is met within: — Ascaris
- The parts of neurons that perform basic cellular functions, such as protein synthesis, are the: — Somas
- Lewy bodies are found in: — Brain
- Prosoma in scorpion comprises: — Head and thorax
- What causes Pituitary Nanism? — Hyposecretion of Somatotrophic hormone
- A hormone that stimulates the secretion of pancreatic secretions to neutralize the acid chyme from the stomach, is: — Secretin
- Cross bridges, which connect the molecules of a fibril during muscle contraction, are made of: — Myosin
- Muscles of alimentary canal are chiefly: — Unstriated and neurogenic
- Muscles of which of the following are smooth unstriated and are innervated by fibres of ANS? — Muscles of alimentary canal
- The photosensitive parts of rod cells are made up of: — Rhodopsin
- The protein which maintains the muscular storage of oxygen is: — Myoglobin
- In a normal person at rest the cardiac output or amount of blood pumped per minute by the left ventricle is approximately: — 5 litres
- Biogeographical regions are also called: — Realms
- Human nerve cells develop from the embryonic: — Ectoderm
- Vertebrate kidney has a following basic unit: — Nephron
- The infective stage of malaria parasite is: — Sporozoite
- FSH and LH hormones together are called: — Gonadotropic hormone
- Shivering in severe cold is caused by: — Involuntary action of striated muscles
- Hypocalcaemia is caused due to under secretion of: — Paratharmone
- The emergency hormone in humans is: — Adrenaline
- Polio immunizing vaccine was developed by: — Dr. Salk
- In mammals which organ acts as blood bank? — Spleen
- Structure involved in Addison's disease is: — Adrenal Cortex
- Biceps and Triceps surround: — Humerus
- Chemical nature of insulin is: — Protein
- The application of genetic principles for the improvement of mankind is: — Eugenics
- Cockroach and other insects possess an: — Open type vascular system
- Ganglioside is found in: — Nerve
- 'Metachrosis' is found in: — Amphibians
- Healthy parents with normal height gave birth to a achondroplasia (dwarf) child. This is due to: — Spontaneous mutation
- The limited period of sexual receptivity that occurs around the time of ovulation in all female mammals except humans is called: — Estrus

AGRICULTURE/ANIMAL HUSBANDRY

- Jalpriya is a variety of: — Paddy
- Sugarcane + Potato is an intercropping system of: — Autumn season
- Seed-rate of potato per hectare is: — 40 quintal/hectare
- What kind of soil is treated with gypsum to make it suitable for cropping? — Alkaline
- The branch of agriculture which deals with the feeding, shelter, health and breeding of the domestic animals is called: — Animal Husbandry
- A plant with compound leaves is: — Coconut
- Study of field crops is called: — Agronomy
- The term 'GM food' refers to the food: — that is genetically modified
- Bee keeping is known as: — Apiculture
- HYV refers to: — High yielding variety
- Vegetables are easily perishable because of their high content of: — Water
- Deficiency symptoms of calcium on plants first appear at: — terminal leaves
- Which weedicide is used to kill broad leaf weeds in wheat? — 2, 4 - D.S.S. (WPSS)
- Maya is the variety of: — Mustard

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left ventricle is approxi-
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- The weed that causes Asthma is: — Parthenium
- Which crop requires maximum amount of nitrogen? — Sugarcane
- First dwarf variety of paddy developed in India is: — Govind
- Sprinkler irrigation is suitable, where the soil has: — Clayey texture, loamy texture and undulating typography
- Endosulphan is also known as: — Thiodan
- DDVP is known as: — Nuvan
- Seed treatment with Vitavex is the main controlling method of: — Loose Smut, Rust and Downy Mildew
- Covered smut of barley is a disease of: — Internally seed borne
- In India, about 142 million hectare land is under: — cultivation
- The headquarters of Indian Meteorological Department was established in 1875 at: — Calcutta
- Moisture condensed in small drops upon cool surface is called: — Dew
- How many agro-climatic zones (ACZ) are found in India? — 15
- Pudding is done to: — Reduce percolation of water, Pulverise and levelling soil and kill weeds
- This 'Biofertilizer' is a nitrogen fixing micro-organism, beneficial for non-leguminous as well as for vegetable crops: — Azobacter
- This variety of Tomato is highyielding with good quality fruits and suitable for Jharkhand State for cultivation: — Swarna Lalima
- 'Sweta Seedless' grape variety recently released by IIHRBangalore, is suitable for growing in: — South India
- Rabi Sorghum is an important crop suitable for 'Rainfed Ecosystem' of which state of India? — Maharashtra
- Which 'Agro-Ecosystem' is characterized by low, erratic rainfall with high coefficient of variation and frequent droughts in India? — Arid agro-ecosystem
- What is botanical (Scientific) name of Safed Musli–a medicinal plant grown almost all over India? — Chlorophytum borivilianum
- Drip-irrigation has been most successful for: — Grapes
- Contract farming consists of: — company taking on lease basis farmers' land for cultivation
- Water held in the soil is not available to the plant, if it is held at tension? — above 15 atmosphere
- While starting cultivation of medicinal and aromatic plants, first it should be ensured: — availability of assured profitable market
- West Coast Tall (WCT) is a variety of: — Coconut
- Norman Borlaug the 'Father of Green Revolution' has developed a highly recognized and appreciated cultivating variety of: — Wheat
- Which one of the following helps in absorption of phosphorus from soil by plants? — Glomus
- An organism used as biofertilizer for raising soybean crop is: — Rhizobium
- In tissue culture medium, the embryoids formed from pollen grains is due to: — Cellular totipotency
- Haploid plantlets can be produced by: — Pollen Culture
- Pure line breeds refer to: — Homozygosity only
- Necrosis, or death of tissue particularly leaf tissue, is due to the deficiency of: — Ca, Mg, Cu and K
- "Jaya" and "Ratna" developed for green revolution in India are the varieties of: — Rice
- The entire collections of plants/seeds having all diverse alleles for all the genes of a crop is called: — Germplasm
- The capacity to generate a whole plant from any cell/explants is called: — Totipotency
- The method of producing thousands of plants through tissue culture is called: — Micropropagation
- Mutations can be induced with: — Gamma radiations
- 'Himgiri' developed by hybridisation and selection for disease resistance against rust pathogens is a variety of: — Wheat
- Breeding crops with higher levels of minerals, vitamins or higher protein and healthier fats is called: — Biofortification
- The superiority of the hybrid over either parent in one or more traits is: — Heterosis
- Plants having similar genotypes produced by plant breeding are called: — Clone
- The process to induce mutations artificially through use of chemicals or radiations is called: — Gamma Radiations
- The emasculation of flower buds is achieved by removing: — Anther
- A transgenic food crap which may help in solving the problem of night blindness in developing countries is: — Golden Rice
- The phenomenon of Heterosis has been most commercially exploited first in: — Maize
- Processed meat and poultry products have good market. However, their export is mainly hampered due to: — unhygienic conditions of slaughter houses and animal diseases
- Arabica is a type of: — Flower
- Vermicompost is prepared with the help of following: — Earthworms
- The average carbon / nitrogen ratio of soils is generally: — 14:1
- In case of Drip irrigation which of the following advantage is observed? — It saves water
- The hybrid of which one of the following crops was evolved by India using modern DNA techniques and released in February 2005? — India has not released any such hybrid so far
- Approximately how many eggs does a female silkworm lay in 24 hours after the proper copulation with the male moth in India? — 1200
- Other things being suitable, what level of temperature is considered ideal for optimum growth of banana crop? — 18 degree celsius
- Iodine deficiency in the Sow's ratio during pregnancy would be reflected through the symptom of: — Birth of hairless piglets
- In the literature on the development of GMO crops, which one of the following crops is among those crops that have been designated as Orphan Crops? — Corn
- Milk fever in cattle is caused due to the deficiency of : — Calcium

HUMAN BODY SYSTEM

- Atherosclerosis refers to ailment of: — Heart
- Our bones and teeth are generally made of: — Tri-calcium Phosphate
- Pituitary gland is located in: — Brain
- What is the limit of MG/DL of blood sugar in the normal person at the time of fast? — 70-100
- Labourers who do hard manual labour develop thick skin on their palms and soles due to: — thick epidermis, thick dermis and thick subcutaneous tissue
- Pathogenic bacteria secrete: — Antigens
- The element which is the most abundant in the human body is: — Oxygen
- The area of the human tongue sensitive to bitterness is restricted to: — Posterior part
- Amniocentesis is a method for: — Determination of fetal health conditions
- What may be the cause of malfunctioning of thyroid gland? — Iodine deficiency
- The element which is the most abundant in the human body is: — Oxygen
- What are the blood corpuscles that help to build up resistance against diseases? — Leucocytes
- Which is the gland that holds the body's thermostat? — Hypothalamus
- What is the chromosome number in a human ovum? — 46
- Which organ of the body never rests? — Heart
- In which part of the eye lies the pigment that decides the colour of the eyes of a person? — Iris
- In a human body, the longest bone is in the: — Thigh
- The total number of vertebrae in a human being is: — 33
- On the average, what percentage of human body has the element of oxygen? — 65
- Dehydration in human body is caused due to the deficiency of: — water
- The tissue in man where no cell division occurs after birth is: — Nerves
- At very high altitude, the Red Blood Corpuscles in the human body will: — increase in size
- The metal present in insulin is: — Zinc
- What is the number of chromosomes in a normal human body cell? — 46
- Out of the following glands, which is referred to as the master gland? — Pituitary gland
- What is an antibiotic? — A synthetic compound inhibiting the growth of bacteria
- Which is the organ that excretes water, fat and various catabolic wastes? — Kidney
- Excretory products of mammalian embryo are eliminated out by: — Placenta
- During dehydration what is the substance that is usually lost by the body? — Sodium Chloride
- A person will have brown eyes, blue eyes or black eyes depending on the particular pigment present in the: — Iris
- Development of an egg without fertilization is called: — Parthenogenesis
- In the process of dialysis used on patients with affected kidneys, the phenomenon involved is: — Osmosis
- What is the normal blood sugar level of a human being? — 120-150 mg/dl
- Literal meaning of the term "Homo Sapiens" is: — Man: The Wise
- The blood cholesterol level in 100 ml of blood in a normal person varies between: —150 and 200 mg
- The body temperature is regulated by: — Hypothalamus
- Fluid part of blood devoid of corpuscles is called: — Serum
- Heart murmur indicates a: — defective valve
- The enzyme in whose presence glucose and fructose are converted into alcohol is: — Zymase
- The medical term used for the sleeplessness is: — Insomnia
- The enzyme that is present in the saliva of man is: — Amylase
- Study of newly born up to the age of 3 months is called: — Neonatology
- The colour of human skin is produced by: — Melanin
- Which is the anti-coagulant substance in blood? — Heparin
- The number of chambers in a human heart is: — Four
- How many bones are there in the human body? — 206
- The normal RBC count in adult male is: — 5.0 million
- Which of the part of tongue bears cells for sour taste? — Sides
- The large amount of sugar present in human blood is: — Glucose
- Deep fried food materials are carcinogenic because they are rich in: — Hydrocarbons
- Besides carbohydrates, a major source of energy in our food is constituted by: — Fats
- The average heart beat rate per minute in a normal person is: — 72
- EEG records the activity of: — brain
- What happens to a person who receives the wrong type of blood? — The RBCs agglutinate
- Pituitary gland is situated in: — The base of the brain
- The brain of human adult weighs about: — 1200-1300 gram
- The ability of the eye to see in the dark, is due to the production of a purple pigment known as: — Retinene
- Adrenaline directly affects: — Sinoatrial node
- All arteries carry oxygenated blood, except: — Pulmonary artery
- Which chamber of the human heart has the thickest muscular wall? — Left Ventricle
- If one litre of water is introduced in human blood, then: — RBC collapses and urine production increases
- The vein that does not directly open into the heart is: — Posterior mesenteric vein
- What is reabsorbed through loop of Henle? — Water
- Why do we urinate more in wet and cold months? — Sweating is much reduced
- When the infection invades the urinary bladder, it is called: — Cystitis
- When the infection is localized in the urethra, it is called: — Urethritis

- Which two waste products are removed from the blood in liver by Ornithine cycle? — **Ammonia and Carbon dioxide**
- Volume of urine is regulated by: — **Aldosterone and ADH**
- Coronary heart disease is due to: — **Insufficient blood supply to the heart muscles**
- Maximum amount of oxygen is exchanged from the blood in the: — **capillaries surrounding tissue cells**
- Organ that produces bile is: — **Liver**
- The component in bile which helps to emulsify fat in the duodenum is: — **Bile salts**
- The HCl in gastric juice converts: — **Pepsinogen to pepsin**
- Enzymes that is found on the mucosa of the intestinal villi is: — **peptidase**
- Which factor is required for maturation of erythrocytes? — **Vitamin B12**
- The hardest substance in the vertebrate body is: — **enamel**
- Neuroglial cells support and protect: — **Neurons**
- How many laminae are present in the grey matter of spinal cord? — **10**
- A short Gap in the myelin sheath around a nerve fiber is called: — **Node of Ranvier**
- Broca's area in the left hemisphere of the brain is related to: — **Speech**
- Cocaine as a stimulant of the CNS interferes with the re-uptake of ____ at synapses. — **Dopamine**
- Functions of smooth muscles, cardiac muscles, organs, and glands are regulated by _____ system. — **Autonomic**
- Comprehension of spoken and written words take place in which region of the brain? — **Wernicke's Area**
- There are _____ pairs of cranial nerves arising from the brain. — **12**
- Recording of the electrical activity associated with the heart-beat is called: — **Electrocardiogram**
- Skeletal muscles are controlled by — **Somatic nerves**
- Spinal cord and brain are wrapped in protective membranes known as: — **Meninges**
- The basic cyclic pattern of inspiration and expiration are established by a respiratory center within the: — **Medulla oblongata**
- Which portion of the brain is responsible for various emotions such as pleasure, fear, and happiness? — **Limbic system**
- The difference in charge between inside and outside environment (change in voltage) of the nerve cell membrane is measured by: — **Oscilloscope**
- The thin and convoluted outer layer of gray matter that covers the cerebral hemispheres is: — **Cerebral cortex**
- When sympathetic nervous system is activated it causes the secretion of: — **Adrenaline which stimulates the organ**
- The glucose is converted into glycogen in liver and stored in: — **Liver**
- The vitamin essential for blood clotting is: — **Vitamin K**
- Enzymes that is found on the mucosa of the intestinal villi is: — **Peptidase**
- To prevent entry of food into the trachea the opening is guarded by: — **Epiglottis**
- Sericteries are modified: — **Salivary glands**
- Angiotensinogen is a protein produced and secreted by: — **Liver cells**
- The main function of lacteals in the villi of human small intestine is the absorption of: — **Fatty acids and glycerol**
- Continued consumption of a diet rich in butter, red meat and eggs for a long period may lead to: — **hypercholesterolemia**
- The backflow of faecal matter in the large intestine is prevented by the presence of: — **ileocecal (ileocaecal) valve**
- An artificial pace-maker is implanted subcutaneously and connected to the heart in patients: — **with irregularity in the heart rhythm**
- In a healthy adult man the normal diastolic pressure is: — **80 mm Hg**
- In which of the following disorders, blood has a defective hemoglobin? — **Sickle cell anemia**
- Lead concentration in blood is considered alarming if it is: — **30 µg/100 ml**
- The difference between systolic and diastolic pressure in human is: — **40 mm Hg**
- Rh –ve person donated blood to Rh +ve person for the second time. Then: — **Nothing happens to Rh +ve person**
- The deposition of lipids on the wall lining the lumen of large and medium sized arteries is referred to as: — **Atherosclerosis**
- The valves which allow blood to flow from the ventricles into the arteries and not in the opposite direction are: — **A.V valve (Atrioventricular valve) and semilunar valve**
- Arteries are best defined as the vessels which: — **Carry blood away from the heart to different organs**
- Artificial pace maker is transplanted in: — **Below the collar bone**
- Average cardiac output is: — **5.3 litre/minute**
- Serum is: — **Blood without corpuscles and fibrinogen**
- Blood pressure increases and heart rate decreases in response to: — **Increased intracranial pressure**
- Both erythrocytes and leucocytes are formed in: — **Bone Marrow**
- Which neuroglia cells produce a fatty insulating material called myelin? — **Schwann Cells**
- Patients suffering from cholera are given a saline drip because: — **Na+ ions help in the retention of water in the body tissues**
- If vagus nerve in man is damaged, which of the following will be affected? — **Pancreatic secretion, gastrointestinal movements and cardiac movements**
- Cornea transplant in humans is almost never rejected. This is because: — **It has no blood supply**
- Brain completely depends on blood from the supply of: — **Oxygen and Glucose**
- Bundle of His is a network of: — **Muscle fibres found only in the ventricle wall**
- 'Bundle of His' is a part of which one of the following organs in humans? — **Heart**
- Cardiac output is defined as the amount of blood: — **Pumped by each ventricle per minute**
- Christmas disease is also known as: — **Haemophilia B**
- Major part of the plasma consists of: — **Water**

- Compared to blood our lymph has: — More WBCs and no RBCs
- Diastole occurs due to: — Relaxation of heart muscles
- During storage of blood anticoagulant added to it may be: — Sodium oxalate
- Fresh frozen plasma (FFP) does not contain: — Platelets
- Globulins contained in human blood plasma are primarily involved in: — Defence mechanisms of body
- Graveyard of RBCs is: — Spleen
- Haemoglobin oxygen dissociation curve is: — Sigmoid
- The function of vagus nerve innervating the heart is to: — Reduce the heart beat
- Hardening of the arteries due to deposition of cholesterol is called: — Atherosclerosis
- Largest amount of urea is normally carried by: — Hepatic vein
- The kind of epithelium which forms the inner walls of blood vessels is: — Squamous epithelium
- Heparin is: — Anticoagulant
- Murmur is a disorder of: — Heart Valves
- Heparin is produced by: — Liver cells
- Hepatic portal system connects: — Digestive system to liver
- In a cardiac output of 5250 ml/minute, with 75 heart beats per minute, the stroke volume is: — 70 ml
- In a typical heart, if EDV is 120 ml of blood and ESV is 50 ml of blood, the stroke volume (SV) is: — 120 – 50 = 70 ml
- In developing embryo RBCs are formed in: — Liver
- Opening to the trachea is covered by a small flap of tissues termed as the: — Epiglottis
- The exchange of gases between inhaled air and blood is referred as: — External respiration
- The maximum volume of air contained in the lung by a full forced inhalation is called: — Total lung capacity
- The maximum volume of air that can be released from the lungs by forceful expiration after deepest inspiration is called the: — Vital capacity
- The trachea divides into two smaller tubes called: — Bronchi
- Oxygenated blood occurs in: — Pulmonary vein
- Which one of the following makes all the cholesterol that human body needs? — Liver
- Carrier ions like Na+ facilitate the absorption of substances like: — Fructose and some amino acids
- In higher vertebrates, SA node helps in: — Initiation of heart beat
- Which type of white blood cells are concerned with the release of histamine and the natural anti coagulant heparin? — Basophils
- If due to some injury the chordae tendinae of the tricuspid valve of the human heart is partially non-functional, what will be the immediate effect? — The flow of blood into the pulmonary artery will be reduced
- The cells lining the blood vessels belong to the category of: — Squamous epithelium
- In humans, blood passes from the post caval to the diastolic right atrium of heart due to: — Pressure difference between the post caval and atrium
- The most active phagocytic white blood cells are: — Neutrophils and monocytes
- To obtain a standard ECG, a patient is connected to the machine with three electrodes: — One to each wrist and to the left ankle
- If for some reason our goblet cells are non-functional this will adversely affect: — Smooth movement of food down the intestine
- The average diameter of Red Blood Corpuscles of man is: — 7.2 ìm
- Name the hormone that stimulates the secretion of gastric juice. — Gastrin
- Bile salts act as activator of which enzyme? — Lipase
- Concentration of the urine is controlled by: — ADH
- Damage to thymus in children may lead to: — Loss of cell-mediated immunity
- ACTH stimulates the adrenal cortex to release a group of hormones called: — Glucocorticoid
- Adrenocorticotropic hormone stimulates the adrenal cortex to produce: — Cortisol
- Chemical signals released by an organism that influence the behavior of other individuals of the same species are called: — Pheromone
- An enlarged thyroid is the result of _____ deficiency. — Iodine
- Anabolic steroids are _____ versions of testosterone. — Synthetic
- The hormone known to participate in metabolism of calcium and phosphorus is: — Calcitonin
- Respiratory centre is located in the: — Medulla oblongata
- Bronchi branch into the tubes of smaller diameters (less than 1 mm) known as: — Bronchioles
- What is the instrument that measures the amount of air inhaled and exhaled with each breath? — Spirometer
- Emphysema, a chronic disorder is high in cigarette smokers. In such cases the _____ of the person is/are found damaged. — Alveolar walls
- Asthma is due to: — Bronchioles constrict due to muscle spasms
- Amount of air in the lungs that remains after deep breathing is called: — Residual volume
- What protects the moist membranes of the respiratory tract? — Mucus and cilia
- Bulk of carbon dioxide (CO_2) released from body tissues into the blood is present as: — Bicarbonate in blood plasma and RBCs
- The kind of tissue that forms the supportive structure in our Pinna (external ears) is also found in: — Tip of the nose
- Deficiency of adrenal cortex hormones results in: — Addison Disease
- During growth period release of too much growth hormone can lead to: — Gigantism
- Endemic goitre is a state of: — Decreased thyroid function
- Glucagon hormone is secreted by the: — Pancreas

- Hormone responsible for the secretion of milk after parturition: — Prolactin
- The nerve centres which control the body temperature and the urge for eating are contained in: — Hypothalamus
- Which part of human brain is concerned with the regulation of body temperature? — Hypothalamus
- In adults, insufficient thyroxine can lead to: — Myxedema
- In children, hypothyroidism (underactive thyroid gland) can lead to: — Cretinism
- In Male the sex hormone that maintains sexual organs and secondary sex characteristics is: — Testosterone
- In the body, both the blood sodium and potassium levels are regulated by: — Aldosterene
- Islets of Langerhans are found in: — Endocrine pancreas
- Name the condition when the concentration of Ketone body increases in urine. — Diabetes mellitus
- Pituitary gland known as the 'master' endocrine gland is under the control of: — Hypothalmus
- The endocrine gland which contributes to setting the body's biological clock is the: — Pineal gland
- In human adult females oxytocin: — Causes strong uterine contractions during parturition
- Aggregates of lymphoid tissue present in the distal portion of the small intestine are known as: — Peyer's patches
- The basic functional unit of human kidney is: — Nephron
- The Bowman's capsules are found in: — Cortex
- The hollow space at the centre of kidney where urine is collected after its formation is called: — Renal Pelvis
- The lungs are important organs for excretion of: — Carbon dioxide
- The main nitrogen-containing waste excreted in urine is: — Urea
- The muscular tubes which take the urine from the kidneys to the bladder are: — Ureters
- The principal nitrogenous excretory compound in humans is synthesised: — In the liver but eliminated mostly through kidneys
- The process of dilution of urine takes place in: — Loop of Henle
- The renal medulla consists of cone-shaped tissue masses called: — Renal Pyramid
- The size of filtration slits of Glomerulus are approximately: — 25 nm
- The term haematuria is used to describe: — Presence of Red Blood cells in Urine
- The yellow pigment derived from heme breakdown and excreted by kidneys is: — Urochrome
- Urea is produced as an excretory substance in human body in: — Liver
- Ability of the kidneys for the production of concentrated urine is dependent on: — Countercurrent mechanism
- Accumulation of urea and other waste substances in the blood is called: — Uremia
- Bile manufactured by liver is stored within the: — Gall bladder
- Hemoglobin retains oxygen and releases it in the: — Tissues
- Human nose contains _____ nasal cavities. — Two
- In the human body which concentration is regulated mainly by the kidneys? — Bicarbonate
- Lungs are enclosed by: — pleural membranes
- Number of lobes in both right land left lungs are respectively: — 3 and 2
- Rheumatic fever can cause damage to: — Heart valves
- The oxygen dissociation curve is shifted to the right by an increase in: — H+ concentration, PCO2 and temperature
- The primary muscle of inspiration which forms the floor of the thoracic cavity is: — Diaphragm
- The tube which leads to the stomach from the throat is: — Esophagus
- Voice box or _____ is the portion of the respiratory tract which contains the vocal cords for producing sound. — Larynx
- Creatinine the waste product closely regulated by the brain and kidneys is the end product of the metabolism of: — Muscle
- Glomerular capsule and convoluted tubules always lie within the: — Renal Cortex
- If a man takes large amount of protein, he is likely to excrete more amount of: — Urea and Uric acid
- If a person undergoes a prolonged fasting then his urine will be found to contain higher levels of: — Ketones
- In the kidneys, osmotic pressure controls: — Water absorption

NUTRITION/HUMAN DISEASES & CURE

- A certain patient is suspected to be suffering from Acquired Immune Deficiency Syndrome. Which diagnostic technique will you recommend for its detection? — ELISA Test
- A metastatic cancerous tissue is termed 'sarcoma' if the disorder is in: — Fibroblasts
- A health disorder that results from the deficiency of thyroxin in a adults and characterized by (i) a low metabolic rate, (ii) increase in body weight and (iii) tendency to retain water in tissues is: — Myxedema
- Bile helps in digestion of fats through: — emulsification
- Bile secretion occurs in the proportion of: — amount of fat in food
- If a patient is advised to take more meat, butter milk and eggs in his diet. The person is: — Suffering from Kwashiorkor disease
- Correct enzyme-substrate pair is: — Casein-rennin
- A pair of small lymphatic tissue present at the sides of root tongue is called as: — Tonsils
- Anxiety and eating spicy food together in an otherwise normal human, may lead to: — Indigestion
- Aneurin is the other name for: — Vitamin B1
- Bilirubin and biliverdin are present in: — Bile
- Penicillin is extracted from: — Fungus
- Which is the effect of antigen in an ill person? — It increases the production of antibiotics
- The disease caused by Asbestos is: — Emphysema
- In the eye, colour vision is affected by the presence of: — Cones
- Quantity of fresh air required for a man is: — 1000 cubic feet of air for every 20 minutes
- Reserpine is used to: — reduce high blood pressure

- A 'breath test' used by traffic police to check drunken driving uses: — potassium dichromatesulphuric acid
- Typhoid fever is caused by: — Bacteria
- Sweetex used by the diabetic patients has energy content of: — Zero calories
- Night blindness results from: — Vitamin A
- Edward Jenner is associated with: — Small Pox
- The scientist who explained about blood circulation for the first time was: — William Harvey
- Hay fever is a sign of: — Allergy
- Where did the new form of pneumonia "SARS" start? — China
- BCG vaccination is to be given to a new-born child: — within 48 hours
- The Vitamin which helps in clotting of blood is: — Vitamin K
- Roundworm is a human parasite found in the: — Large Intestine
- Xerophthalmia is a deficiency disease caused by lack of: — Vitamin A
- EEG is used to detect the functioning of: — Heart
- Locked jaw disorder is the other name of the disease: — Tetanus
- Milk is not considered a balanced diet now-a-days because of the absence of: — Iron and Vitamin C
- Sea sickness is due to the effect of the motion of ship, on: — Stomach
- The main function of white blood cells in the body is to: — Protect body against diseases
- What part of the eye gets inflamed and becomes pink when dust gets into? — Conjunctiva
- Pregnant women usually become deficient in: — Calcium and Iron
- The causative organism of dengue fever is: — Virus
- Thalassemia is a hereditary disease. It affects: — Blood
- Full form of the infectious disease SARS is: — Severe Acute Respiratory Syndrome
- Insects responsible for transmitting diseases are called: — Vector
- Founder of Homeopathy is: — Samuel Hahnemann
- Bleeding of gums and loosening of teeth is caused due to deficiency of: — Vitamin C
- Deficiency of vitamin D in children causes: — Rickets
- Scurvy is a disease which is caused due to the deficiency of vitamin: — Vitamin C
- Tamiflu is frontline drug against: — Bird Flu
- Why excessive heating and repeated use of cooking oil are most undesirable? — Carcinogenic substances like benzpyrene are produced
- Quarantine regulation is concerned with: — prevention of entry of diseased organism
- Toxicology is related to the study of: — Poisons
- Which part of human body is first highly affected by nuclear radiation? — Skin
- The standard audible capacity of a healthy human being as per World Health Organisation is in the range of: — 5-10 decibels
- Cancer is a disease where we find uncontrolled: — Cell Division
- Triple vaccine is administered to a new born child to immunize it against: — whooping cough, tetanus and diphtheria
- An antibiotic is: — a chemical synthesized by a micro-organism against another microorganisms
- M.R.I stands for: — Magnetic Resonance Imaging
- The science dealing with the study of teeth is: — Odontology
- The causative agent of Tuberculosis is: — Mycobacterium
- Blood cancer is otherwise called as: — Leukaemia
- Radioimmunoassay (RIA) is a therapy used: — to detect antibodies and hormones present in the blood samples
- The disease in which the sugar level of blood increases is known as: — Diabetes insipidus
- Jaundice is a symptom of disease of: — Liver
- The vaccination against small pox involves the introduction of: — weakened germs
- Deficiency of Vitamin B_6 in man causes: — Anaemia
- First successful heart transplantation was done by: — C.N. Barnard
- Yellow Fever is transmitted by: — Aedes
- Washing of peeled vegetables removes which vitamin? — Vitamin C
- A man with colour blindness will see red as: — Green
- The metal, which is a constituent of Vitamin B_{12} is: — Cobalt
- According to WHO, the bird flu virus cannot be transmitted through food cooked beyond: — 70° Celsius
- The vitamin that helps in blood clotting is: — Vitamin K
- The vitamin that helps to prevent infections in the human body is: — Vitamin C
- The H5N1 virus which causes bird flu was first discovered in: — 1997
- Tetanus is caused by: — Clostridium
- Vitamin E is particularly important for: — Normal activity of sex glands
- Blood pressure is controlled by: — Adrenal Gland
- The deficiency of Vitamin B causes: — Beriberi
- The expansion for AIDS is: — Acquired Immuno Deficiency Syndrome
- Human cloning is permitted in Britain for the purpose of: — Therapeutics
- Anaemia occurs due to the deficiency of: — Folic acid
- For a healthy heart, one needs to take a balanced diet, adequate sleep and: — do right amount of physical exercise
- An ECG shows the functioning of the: — Heart
- If the radius of blood vessels of a person decreases his/her blood pressure will: — increase
- Cell or tissue death within a living body is called as: — Necrosis
- Insufficient blood supply in human body is referred as: — Ischema
- Typhoid is caused by: — Salmonella Typhi
- BCG immunization is for: — Tuberculosis
- The concentration decreases in anaemia? — Haemoglobin
- Which disease usually spreads through air? — Tuberculosis
- Small Pox is caused by: — Variola Virus

- Respiration process requires: — Oxygen
- A vitamin requires cobalt for its activity. The vitamin is: — Vitamin B_{12}
- Ringworm is a which type of disease? — Fungal disease
- The vitamin most readily destroyed by heat is: — Ascorbic acid
- The vector that transmits cholera is: — Housefly
- A drug which helps in controlling fever is: — Paracetamol
- The limb bones of children become bent if there is deficiency of vitamin: — D
- A medicine which promotes the secretion of urine is called: — Diuretic
- Deamination occurs in liver to: — make use of excess amino acid
- Epithelial cells of intestine involved in food absorption have on their surface: — Microvilli
- Excessive intake of alcohol causes: — Liver cirrhosis
- Gastric juice contains: — Pepsin and Hydrochloric Acid
- Hydrolytic enzymes occur in: — Lysosomes
- Carcinoma refers to: — Malignant tumours of the skin or mucous membrane
- Common cold is not cured by antibiotics because it is: — caused by a virus
- At which stage of HIV infection does one usually show symptoms of AIDS? — When HIV replicates rapidly in helper T-lymphocytes and damages large number of these
- Cancer cells are damaged by radiations while others are not because cancer cells are: — Undergoing rapid divisions
- Alzheimer disease in humans is associated with the deficiency of: — Acetylcholine
- Suspension of attenuated pathogen that stimulates antibody formation is: — Vaccine
- Use of anti-histamines and steroids give a quick relief from: — Allergy
- Motile zygote of Plasmodium occurs in: — Gut of female Anopheles
- Infectious proteins are present in: — Prions
- The pathogen Microsporum responsible for ringworm disease in humans belongs to the same Kingdom of organisms as that of: — A mould
- Where will you look for the sporozoites of the malarial parasite? — Saliva of infected female Anopheles mosquito
- Goitre can occur as a consequence of all the following except: — Excessive intake of exogenous thyroxine
- The immunoglobulin abundant in colostrums is: — IgA
- How many variable segments are present in the basic structure of antibody molecules? — 4
- Aedes aegypti is a vector for: — Both dengue and yellow fever
- To which type of barriers under innate immunity, do the saliva in the mouth and the tears from the eyes, belong? — Physiological barriers
- Antigen binding site in an antibody is found between: — one heavy and one light chain
- The complexes formed during immune complex mediated hypersensitivity are removed by: — Eosinophils and Monocytes
- Antibodies in our body are complex: — Glycoproteins
- Cattle fed with spoilt hay to sweet clover which contains dicoumarol or dicumaro? — may suffer vitamin K deficiency and prolonged bleeding
- Hemozoin is released into blood during the infection of plasmodium vivax every: — 48 hours
- Sickle cell anaemia has not been eliminated from the African population because: — It provides immunity against malaria
- Nobel prize for medicine was given for confirming the role of Helicobacter pylori in causing: — Peptic ulcer
- The letter T in T-lymphocyte refers to: — Thymus
- Increased asthmatic attacks in certain seasons are related to: — Inhalation of seasonal pollen
- The pathogen Microsporum responsible for ringworm disease in humans belongs to the same Kingdom of organisms as that of: — A mould
- Where will you look for the sporozoites of the malarial parasite? — Saliva of infected female Anopheles mosquito
- Goitre can occur as a consequence of all the following except: — Excessive intake of exogenous thyroxine
- Which Ig is produced in primary immune response? — IgM
- The causative agent of mad-cow disease is a: — Prion
- Less intake of which of the following vitamins can cause 'Hyperkeratosis'? — Vitamin A
- Enterokinase converts: — Trypsinogen into trypsin
- In glycolysis ultimately: — glucose is converted into pyruric acid
- When breast feeding is replaced by less nutritive food low in proteins and calories; the infants below the age of one year are likely to suffer from: — Marasmus
- In the absence of enterokinase, the digestion of _____ would be affected in our intestine. — Albumin
- Which cells in liver act as phagocytes? — Kupffer cells
- Keratinization of the skin is prevented by: — Vitamin A
- Intestinal villi are mainly connected with: — Absorption
- Secretin stimulates production of — Pancreatic juice
- In duodenum the enzyme which breaks down starch to maltose is: — pancreatic amylase
- Lipase acts on: — Triglycerides
- Main difference between brown fat and white fat is that the cells of brown fat — Have more mitochondria
- Oxyntic cells in stomach secrete: — Hydrochloric acid
- Peyer's patches found in the small intestine are: — Lymphatic tissue
- Ptyalin is: — Slightly acidic
- Rickets can be prevented by taking: — Calciferol
- Seminal plasma in humans is rich in: — Fructose, calcium and certain enzymes
- Surgical removal of gall bladder in human beings would lead to — Impairment of the digestion of fat
- Taste buds for bitter taste are found on tongue at: — posterior part
- The absorption of glycerol, fatty acids and monoglycerides takes place by the: — Lymph vessels within the villi
- The catalytic efficiency of two different enzymes can be compared by the: — Km value
- Name the substance which is not a product formed in the small intestine? — Proteins

- The characteristics Brunner's glands found in duodenum secrete hormones — Secretin, cholecystokinin
- The first antibiotic was discovered by: — Alexander Fleming
- Ultrasound of how much frequency is beamed into human body for sonography? — 1-15 MHz
- Hybridomas are the fusion product of: — normal antibody producing cell with myeloma
- An insect bite may result in inflammation of that spot. This is triggered by the alarm chemicals such as: — histamine and kinins
- Carcinoma refers to: — Malignant tumours of the skin or mucous membrane
- If you suspect deficiency of antibodies in a person, to which of the following would you look for confirmatory evidence? — Serum Globulins
- Electron beam therapy is a kind of radiation therapy to treat: — certain types of cancer
- The organism which causes pneumonia in human beings is: — Atrichous
- The antibody dependent cytotoxicity is seen in: — Non-compatible blood transfusion
- Which test is used to estimate the level of blood alcohol by analyzing the breath of persons drinking alcohol? — Dope Test
- The term "antibiotic" was coined by: — Selman Waksman
- The incubation period of Hepatitis 'B' virus is: — 30-180 days
- What is common to all types of diarrhoeal diseases and adequate supply of fluids and electrolytes should be ensured? — Dehydration
- A localized inflammatory response appears at the site of infection causes redness, swelling, pain and heat due to certain chemical, they are: — Histamine and prostaglandins
- Antivenom is used for the treatment of snake bite. The treatment of snake bite by antivenom is an example of: — artificially acquired passive immunity
- A person likely to develop tetanus is immunized by administering: — Preformed antibodies
- The phenomenon where tumour cells detach and migrate to other parts of the body where they give rise to secondary tumours is called: — Metastasis
- Which cells in the human body release excessive amounts of inflammatory chemicals, which cause allergic reactions? — Mast Cells

ENVIRONMENT/ECOSYSTEM/POLLUTION

- Study of relationship of organisms to their environment is: — Ecology
- All populations within an ecosystem interconnected to one another are known as: — Community
- Major regional ecological community of plants and animals forms: — Biomes
- The actual location or place where an organism lives is: — Habitat
- Two richest known sources of edible proteins are: — Soyabean and groundnut
- Which are the largest fixator of solar energy? — Green Plants
- The carbon dioxide content in the air that we exhale is about: — 4%
- The role a species plays in a community including behavior and influence is: — Niche
- Study of a single population's relationship to its environment is called: — Autecology
- The biosphere covers about: — 16-20 km
- Concept of ecological pyramids was proposed by: — Chlares Elton
- The term 'Ecosystem' was coined by: — Arthur G. Tansley
- Xeric environment is characterized by: — Low atmospheric humidity
- Total amount of living material at the various trophic levels of a food chain is depicted by pyramids of: — Biomass
- About 70% of total global carbon is found in: — Oceans
- When the two ecosystems overlap each other, the area is called: — Ecotone
- Which of the following statements about food chain is correct? — The length of food chains is generally limited to 3 - 4 trophic levels due to energy loss
- The tiny free-swimming animals on the surface of water constitute: — Zooplanklton
- The biomass available for consumption by the herbivores and the decomposers is called: — Net primary productivity
- Greenhouse effect is a: — natural phenomenon
- In an area where DDT had been used extensively, the population of birds declined significantly because: — Many of the birds eggs laid, did not hatch
- Measuring Biochemical Oxygen Demand (BOD) is a method used for: — Estimating the amount of organic matter in sewage water
- dB is a standard abbreviation used for the quantitative expression of: — A particular pollutant
- Common indicator organism of water pollution is: — Escherichia coli
- Industrial melanism is an example of: — Protective resemblance with the surrounding
- Carbon dioxide is called green-house gas because it is: — Transparent to sunlight but traps heat
- Trichoderma harzianum has proved a useful microorganism for: — Bioremediation of contaminated soils
- The two gases making highest relative contribution to the greenhouse gases are: — CO_2 and CH_4
- The slow rate of decomposition of fallen logs in nature is due to their: — Poor nitrogen content
- Transfer of energy in different trophic levels of an ecosystem is called: — Bioenergetics
- The species, though insignificant in number, determine the existence of many other species in a given ecosystem. Such species is known as: — Keytone species
- The nature's cleaners are: — Decomposers and scavengers
- DDT residues are rapidly passed through food chain causing biomagnification because DDT is: — Lipo soluble

- The remains of the dead plants and animals is called: — detritus
- How many bio-geographical regions are present in India? — 10
- Lime is added to the soil which is too: — acidic
- Which one of the following has maximum genetic diversity in India? — Mango
- Darwin's finches are a good example of: — Adaptive radiation
- The least porous soil among the following is a: — Clayey soil
- Maximum nutritional diversity is found in the group: — Monera
- Sacred groves are specially useful in: — Conserving rare and threatened species
- The term Alpha diversity refers to: — Community and ecosystem diversity
- The percentage of forest cover recommended by the National Forest policy (1988) was: — 33% for plains and 67% for hills
- Biodiversity of a geographical region represents: — The diversity in the organisms living in the region
- Prolonged liberal irrigation of agricultural fields is likely to create the problem of: — Salinity
- The greatest problem of water conservation is to reduce the amount of: — Runoff water
- An inexhaustible non-conventional universal source of energy is: — Solar energy
- Wild life conservation aims at: — Maintaining the ecological process and the diversity of life
- Plants like Aegle marmelos, Ocimum sanctum and Ficus religiosa are a group of plants designated as: — Sacred species of plants
- Sacred groves are specially useful in: — Conserving rare and threatened species
- The 10% law for energy transfer in food chains was given by: — Lindemann
- Pyramid of energy in ecosystems is: — Always upright
- Savannahs are: — Grasslands with scattered trees
- Sal (Shorea robusta) forest is a: — Deciduous Forest
- Mass of living matter at a trophic level in an area at any time is called: — Standing Crop
- Microbes that break down the complex organic matter into simple substances like carbon, nitrogen, water etc. are: — Decomposers
- The most recently discovered ecosystem is: — Vents
- Most hazardous metal pollutant of the automobile exhaust is: — Lead
- Ozone day is observed on: — 16 September
- Sulphur dioxide affects: — All membrane systems
- Peeling of Ozone umbrella, which protects us from UV rays, is caused by: — CFCs
- Phosphate pollution is brought about by: — Fertilizers and sewage
- Maximum threat to the world is from: — Ozone hole
- Sound becomes a hazardous noise pollution if its level is above: — 80 dB
- Pollutants having most lasting effect are: — Pesticides
- Lead is one of the most serious environmental pollutants which affects: — Soil
- If there was no CO_2 in the atmosphere, the earth's temperature would be: — Less than the present
- Major aerosol pollutant present in the jet plane emission is: — Chlorofluorocarbon
- Maximum deposition of DDT will occur in: — Sea gull
- The ultraviolet radiations in the stratosphere are absorbed by: — Ozone
- Minamata disease is due to pollution of: — Industrial waste mercury into fishing water
- Montreal Protocol aims at: — Reduction of ozone depleting substances
- Most abundant water pollutant is: — Industrial Wastes
- Most harmful environmental pollutants are: — Nonbiodegradable chemicals
- The atmosphere of big metropolitan cities is polluted most by: — Automobile exhausts
- Gradual and predictable changes in the species composition of a given area is: — Ecological succession
- The maximum biomass occurs in — Tropical Forests
- Animals living at the bottom of the sea are known as: — Benthic
- The ecological pyramid which can be inverted in a tree ecosystem is: — Pyramid of Number
- Energy flow in ecosystem is: — uni-directional
- Which is the reason for highest biomass in aquatic ecosystem? — Bethonic and Borwn algae
- The average trophic efficiency of transfer of energy from one trophic level to the higher trophic level is called: — Linderman's trophic efficiency rule
- In a comparative study of grassland ecosystem and pond ecosystem, it may be observed that: — the abiotic components are almost similar
- Biotic factors refer to: — Living organisms
- In an ecosystem, the main source of energy is: — Solar Energy
- Abiotic components include: — Atmosphere, Hydrosphere and Lithosphere
- Sequence of changes in community and its non-living environment over a period of time is: — Succession
- Plants growing in xeric conditions are called: — Xerophytes
- Lichen and algae form: — Pioneers community
- Diverse and stable community at the end of succession is: — Climax community
- Secondary succession starts from: — From remains of previous ecosystem
- Which term is used for Primary succession starting in a pond? — Hydrosere
- Wood forests form the: — Climax community
- Disease in living organisms caused by parasites is called: — Infestation
- Legume plants are the hosts to: — Rhizobium
- A dual organism composed of symbiotic association of an alga living within a fungus myceliium is: — Lichen
- Symbiosis relationship in which only one organism is benefited is: — Commensalism
- Sharks may have small fish attached to them called: — Remoras

- Over grazing leads to: — Totally barren lands
- Oxidation of ammonia or ammonium ions by bacteria in soil is called: — Nitrification
- Gross primary production is: — Total amount of energy fixed by all plants
- Plant biomass is: — Net primary production + Gross primary production minus respiratory loss
- Total solar energy trapped by the producers in an ecosystem is: — 1%
- The major unit of ecology is: — Ecosystem
- Eco' part of word ecosystem means — Environment
- Contamination of water with sewage is indicated by cysts of: — Escherichia coli
- Decomposition of domestic wastes under natural processes is called: — Biodegradable pollution
- Eutrophication causes decrease in: — Dissolved oxygen
- Eutrophication is often seen in — Fresh water lakes
- Fish die in water polluted by sewage due to: — Reduction in O_2
- Fluoride pollution mainly affects: — Teeth
- Gas leaked during Bhopal tragedy was: — Methyl isocyanate
- Global agreement in specific control strategies to reduce the release of ozone depleting substances, was adopted by: — The Montreal Protoco
- Increase in the concentration of pollutants in higher trophic levels is known as: — Biomagnification
- Process that supplies food to living things through decaying and decomposition is called: — Nutrient cycle
- Balance in the nutrient cycle can be upset when: — Decayed nutrients are not returned to the ground
- Endangered species are: — Reduced in number
- What percentage of our energy requirements are met from fossil fuels? — 95%
- Driving force for all the cycles in ecosystem is: — Sun
- Tides are caused by: — Gravitational pull of sun
- Wind blows from area of:— High pressure to low pressure
- Hot substance is escaped from inside the earth in the form of: — Volcanoes, Hot Springs and Geysers
- In oceans of tropical regions: — Temp of surface water is 25 degree C and 5 degree C at depth
- The study of human population and things that affect them is: — Demography
- Replantation of plants in the areas where they were present earlier is called: — Reforestation
- Establishment of new forests where no forests existed previously is called: — Afforestation
- About half of the rain which falls in tropical forests comes from: — Transpiration of plants
- Short-term fluctuations in temperature, cloud cover, wind and precipitation is known as: — Weather
- Diseases caused by UV rays in humans: — Cataracts and Night Blindness
- Sun rays are reradiated from the earth's surface in the form of: — Long wave radiations
- Incomplete burning of carbon compounds cause release of: — Carbon monoxide
- Algal bloom is also called as: — Eutrophication
- The chemical wastes from industry is ca... — Industrial effluents
- Pesticides and fertilizers are also called: — Agrochemicals
- Which are more susceptible to attacks of pests? — Monocultures
- Coniferous forests located at high altitude are called: — Alpine
- Northern coniferous forests are called: — Taiga
- Temperature of temperate deciduous forests is: — 4-30 degree celsius
- Productivity of an ecosystem is indicated by: — Number of plants in that ecosystem and the density of that ecosystem
- Competition is severe in a population that has a distribution which is: — Irregular
- A disease affecting industrial workers is: — Silicosis
- BOD of a pond is related to _____ in per unit volume of water. — All the microbes
- In a population, if the rate of addition of new members is higher than the rate of individuals lost, it shows: — Exponential Growth
- Addition of phosphates and nitra-tes/fertilizers into water leads to: — Nutrient enrichment (eutrophication)
- Attack of asthma in certain persons may be due to: — Inhalation of some air borne pollen
- Biochemical Oxygen Demand (BOD) in a river water: — Increases when sewage gets mixed with river water
- BOD is connected with: —Microbes and organic matter
- Carbon monoxide is a pollutant because it: — Reacts with hemoglobin
- As it travels along the food chain, the concentration of DDT: — Increases
- A chemical harmful released by Chlorofluorocarbon to ozone is: — Chlorine
- CO emitted by automobiles prevents O-transport to body tissues by: — Forming a stable compound with hemoglobin
- In an ecosystem Biotic factors affect the survival of an organism in that ecosystem. They include: — competition for food and water and competition for shelter
- Plant succession occurring in a sandy area is: — Psammosere
- The maximum amount of water that a soil can hold, by capillary action is called: — Field capacity
- In ecological succession from pioneer to climax community, the biomass shell: — Increase continuously
- Individuals of a species which occur in a particular area constitute: — Population
- The role of an organism in the ecological system is known as: — Interaction
- Information about birth rate, death rate, sex ratio, age distribution etc. of a population is obtained from: — Life Table
- Insectivorous plants are adopted to soils: — Deficient in nitrogenous compounds
- Large Woody Vines are more commonly found in: — Tropical Rainforests
- Organisms that can tolerate and thrive in a wide range of temperatures are called: — Eurythermal
- The correct statement is: — Tropical rain forests are disappearing fast from developing countries such as India

- Desert, forests and tundra are the examples of: — Biomes
- Plant species having a wide range of genetical distribution evolve into a local population known as: — Ecotype
- The Place where organism lives and performs its duty is known as: — Niche
- The rate of formation of new organic matter by rabbit in a grassland, is called — Secondary Productivity
- The upright pyramid of number is absent in: — Forest
- The type of ecosystem with the highest mean plant productivity is: — Tropical Rain forest
- In an aquatic ecosystem, the trophic level equivalent to cows in grasslands is: — Zooplankton
- Bell-shaped polygonal pyramid indicates: — Moderate percentage of young individuals
- The age of pyramid with broad base indicates: — High percentage of young individuals
- Eutrophication is: — Adequate nutrition accelerated by human activities
- In polluted lake which organisms dominate the community: — Blue green algae
- Grass land in tropic climates with woody trees is called: — Savanna
- Evolution of vascular bundles in plants and skeleton in animals is an adaptation for: — Terrestrial ecosystem
- Development of bark in plants and skin in animals is a method for: — Reducing water loss
- Zone of lake water which is of open water near the surface is: — Limnetic
- Mountains of Koh Hindukush come under: — Tundra
- End of earth' is related to: — Tundra
- The Species structure and diversity index of an area, biomass and Autotrophic and heterotrophic components constitute: — Community
- Which factor of ecosystem includes plants, animals and microorganisms? — Biotic factors
- A population with equal number of births and deaths will show: — Plateau phase
- A terrestrial animal must be able to: — Conserve water
- Adaptation to low temperature and freezing in animals occurs due to the production of: — Antifreeze
- An association of individuals of different species living in the same habitat and having functional interactions is: — Biotic community
- Animals that have adapted themselves to live in deserts are known as: — Xerocoles
- Association between sea Anemone and Hermit crab in gastropod shell is that of: — Commensalism
- Biotic potential is increase in population under: — Optimum conditions
- CAM helps the plants in: — conserving water
- The abundance of a species population within its habitat is called: — Niche density
- Competition is most severe between two: — Closely related species growing in the same habitat
- When one animal copies the appearance, actions, or sounds of another animal to avoid predators, it is called: — Mimicry

MISCELLANEOUS

- Ordinary table salt is sodium chloride. What is baking soda? — Sodium bicarbonate
- Pollination is best defined as: — transfer of pollen from anther to stigma
- Plants receive their nutrients mainly from: — Soil
- Movement of cell against concentration gradient is called: — Active trasnport
- Photosynthesis generally takes place in which parts of the plant? — Leaf and other chloroplast bearing parts
- Most fish do not sink in water because of the presence of: — swim bladder and air bladder
- Plants synthesiss protein from: — Aminod acids
- Plants absorb dissolved nitrates from soil and convert them into: — Free Nitrogen
- Plants absorb most part of water needed by them through their: — Root hairs
- The combined action of photorespiration, photolysis and light and oxygen induced breakdown is called: — Photo-oxidation
- Process of cell division can take place by: — Mitosis
- Most highly intelligent mammals are: — Dolphins
- Plant development is influenced by: — quality, quantity and duration of light
- Prokaryotic cells lack: — nucleolus, nuclear membrane and membrane bound by organelles
- Photosynthesis takes place faster in: — White Light
- Nucleus, the genetic material containing rounded body in each cell, was first discovered in 1831 by: — Robert Brown
- Primary phloem develops from: — provascular tissue
- Other than spreading malaria, anopheles mosquitoes are also vectors of: — filariasis
- Plants that grow in saline water are called: — Halophytes
- Placenta is the structure formed: — by the union of foetal and uterine tissue
- Plants hormone that induces cell division is: — Kinins
- Neurospora is used as genetic material because: — it has short life cycle of 10 days
- Phloem is a tissue found in: — Plants
- Out of proteins, lipids and carbohydrates present in a cell membrane, what is true? — Carbohydrates are minimum
- Potato is a modified form (outgrowth) of: — Stem
- Prothrombin which helps in clotting of blood is released by: — Blood platelets
- Most of the red, blue and purple colours of plants are due to a pigment called: — Anthocyanin
- Plants growing on sand are called as: — psammophytes
- Our skin, when exposed to excess sunlight, becomes dark. This is because our skin pigments called: — Melanin
- Ramapithecus and Cro-Magnon man are considered: — Ancestors of modern man
- Normal adult human male has: — 14 gram of haemoglobin/100 gram of blood
- Plants wilt due to excess of: — Transpiration
- Monotremes are unique mammals because they: — lay eggs

- Poison glands of snakes are homologous to: — salivary glands of vertebrates
- Radical vascular bundles are those in which: — xylem and phloem occur on the different radii
- Plant bends towards the source of light on account of the movement of curvature known as: — phototropism
- Plants have ____, while animals lack it. — Cellulose
- Photosynthesis is a process which can be described as: — reductive, endergonic and anabolic
- Plants developing in dry conditions are: — Xerophytes
- Pigmentation of skin is due to: — Melanocytes
- Norepinephrine increases: — Blood pressure
- Monocot root differs from dicot root in having: — well developed pith
- Radioactivity is a phenomenon of the spontaneous emission of: — Protons, electrons and gamma rays
- Organic Substances which, in very small amounts, control growth and development called: — Hormones
- Our major foods, fibres, spices, fruits and beverage crops are: — flowering plants
- Movements due to light are shown by: — flowering plants
- Outer covering of virus made up of protein is: — Capsid
- Radish is a: — modified root
- Most common disease of poultry in India is: — Ranikhet disease
- Most abundant tissues of our body are: — muscular
- Mumps is a disease caused by: — Virus
- Rain water helps to increase the ____ to some extent. — Calcium contents
- Number of chromosomes in Down's syndrome is: — 47
- Plants are killed in winter by frost: — because of desiccation and mechanical damage to the tissues
- Pulses are a good source of: — Protein
- Oxygen in our blood is transported by a protein named: — Haemoglobin
- Nymph is the name of young one of: — cockroach
- Plants that grow under average temperature and moisture are called: — Mesophytes
- Oxyreductases, transferases, hydrolases, lyases, isomerases and ligases are all classes of: — Enzymes
- Mutation is: — a change that is inherited
- Pollination by wind is called: — anemophily
- Pollen grains in plants are produced in: — Flower
- Ptyalin is an enzyme produced in the: — salivary glands
- Mycobacterium leprae causes leprosy, Corynebacterium diphtheria causes diphtheria and Vibrio comma causes: — Cholera
- The one which is present in all living things is: — DNA or RNA
- The mechanism of stomatal movement is related to the branch of Biology called: — Physiology
- Maximum number of species of living things on earth are: — Insects
- Variety among amino acids is produced due to: — R Group
- An enzyme which converts a dipeptide into separate amino acids is an example of: — Hydrolase
- Cellular digestion is associated with which organelle: — Lysosomes
- Membranes of the grane are sites where: — Sunlight is trapped
- The simplest of oxygen producting photosynthetic organisms are: — Cyanobacteria
- Protein coasts of viruses are synthesized in: — Lytic Cycle
- Mycoplasmas have been included in bacteria because: — Lack membrane bounded organelles
- Yeasts reproduce asexually by forming: — Buds
- The one which can tolerate highest external osmotic pressure: — Fungi
- Locomotory structures are not found in which of the following group: — Apicomplexans
- The cell wall of oomycetes is chiefly composed of: — Cellulose
- One celled green ptotists are included in: — Algae
- Pick the odd one out: — Psilotum
- The one which is incorrect pair: — Dichotomous - Vernation
- Double fertilization occurs in: — Angiosperm
- Amphoixus is a: — Chordate, Protochordate and Lower chordate
- Adult birds normally possess only one functional: — Ovary
- Following possess bilateral symmetry as larva and radial symmetry as adult: — Echinodermata
- How many moles of carbon dioxide are produced by complete oxidation of one mole of puruvic acid? — 3
- The food of hydra consists of: — Small crustaceans
- Hunger pangs usually begin _____ after the previous meal. — 12-24 hours
- If a plasmolysed plant cell is placed in water the cell will be: — deplasmolysed
- The major constituent of blood plasma is: — Water
- Kangaroo rat most probably would be found in: — Desert
- The greatest diversity of animals in the lake is found in which one of the following zones? — Littoral zone
- What is the characteristic feature of consumers? — Heterotroph
- What percentage of light reaching the earth is used in photosynthesis? — 1%
- Competition between species will be greatest if they attempt to occupy the same: — Niche
- In most ecosystems the greatest amount of energy flows through the: — Herbivores
- Animals with greatest number of similarities are grouped together in a/an: — Genus
- The structure which has been formed or modified from gill pouches in humans is: — Eustachian tube
- According to Lamarch evolution occurred as the result of: — Inheritance of acquired characters
- The discease in which transmembrane carrier for the chloride ion is not produced is: — Cystic fibrosis
- The one which can break open a plasmid ring is: — Ligase enzyme
- A genome is: — Full set of genes of an individual
- Genes will not be found in gene pairs in the: — Sperm cells of frog
- In humans the number of tetrads formed during mitosis is: — 0
- The sequence of 3 bases on tRNA which is complementary to condon of mRNA is called: — Anticodon
- The basic structural unit of a chromosome is: — Nuceleosome

- The first stage of development in which a cavity appears is the: — Balastula
- Exposure to low temperature stimulates plants to flower. This is called: — Vernalization
- The cells present in testes and secrete testosterone are: — Interstitial cells
- The type of learning in which there is loss or decrease in response to repeated stimuli: — Habituation
- The one which causes contraction of wall of the uterus during and after birth: — Oxytocin
- The one that stores calcium: — Sarcoplasmic reticulum
- Sebum produced from sebaceous glands in a mammal helps in: — Protection against micro organisms
- The Locomotory organ of 'Amoeba' is: — Pseudopodia
- The number of chromosomes present in normal human being are: — 46
- An instrument for measuring blood pressure is called: — Sphygmomanometer
- The term 'Rh factor" refers to: — Rhesus Factor
- The discoverer of penicillin was: — Alexander Fleming
- Blood groups were discovered by: — Landsteiner
- The animal which can tolerate more summer heat is:— Goat
- The tissue in man where no cell division occurs after birth is: — Nerves
- DNA fingerprinting is used to identify the: — Parents, Rapist and Thieves
- The normal cholesterol level in human blood is: — 180-200 mg%
- In a food chain, the solar energy utilized by plants is only: — 0.1 per cent
- In coriander, the useful parts are: — Leaves & dried fruits
- Which plant is called 'Herbal Indian Doctor'? — Amla
- The pH of human blood is: — 7.4
- Which part becomes modified as the tusk of elephant? — Second Incisor
- The noble gas used for the treatment of cancer is: — Radon
- Bark of which of the following trees is used as a condiment? — Cinnamon
- Saliva helps in the digestion of: — Starch
- White lung disease is prevalent among the workers of: — Pesticide industry
- Iodoform is used as an: — antiseptic
- The optimum dissolved oxygen level (in mg/litre) required for survival of aquatic organisms is: — 4-6
- An example of false fruit is: — apple
- Normal fasting blood sugar level per 100 ml of blood in man is: — 80-100 mg
- The vector of disease sleeping sickness is: — Tse-tse fly
- Cod is a variety of: — Fish
- A large number of identical plants can be obtained in a short span of time through a large number of seeds of: — Tissue culture technique
- The smallest flowering plant is: — Wolffia
- The tallest and thickest type of grass is: — Bamboo
- The process of preventing the birds from flying is called: — Brailing
- Veins seen in the leaves serve the function of: — Conduction
- The edible part of Cabbage is: — vegetative bud
- Goitre is caused by the deficiency of — Iodine
- The total number of biosphere reserves present in India is — 15
- The normal body temperature of human beings is — 98.4° F
- Columba livia is the scientific name of — Pigeon
- Bones are pneumatic in: — Birds
- An insect - catching plant is: — Nerium
- The method not used as a Biological control is: — Use of pesticides
- Male (Anopheles) mosquito feeds on: — Nectar of flower
- Besides ear ossicles, the cavity of the middle ear in humans contains: — Perilymph
- The percentage of water content in the human blood plasma normally varies from: — 91-92
- "Sodium Pump" operates in: — Nerve Pulse
- The element which is rich in most leafy vegetables is: — Iron
- The function of pacemaker is: — Initiation of heart beat
- The best method of disposal of garbage is: — Land filling
- In 'Scorpion,' poison is present in the: — sting
- The end product of the digestion of starch in the alimentary canal is: — Glucose
- Number of eyes in an earthworm is: — No eyes
- Acupuncture is: — a treatment method with needles
- Some viruses have RNA but no DNA. This would indicate that: — these viruses have no inheritable information
- The presence of cavities is an adaptation of: — Water Plants
- Liver-oil of fish is rich in: — Vitamin A
- Dialysis is used to perform the function of: — Kidneys
- Pesticides are used to destroy: — Insects
- What is the common in AIDS, mumps and poliomyelitis? — These are caused by viruses
- Protein which renders a cell less susceptible to attack by viruses is called: — Inferon
- Haemophilia is mostly associated with: — Royal families
- Approximately, how many times each day does our heart valves open and lose normally? — 1,00,000 times
- Sugarcane plants are usually propagated by vegetative means because: — They do not produce seeds
- The pigment involved in photosynthetic activity is: — Chlorophyll
- Free-living nitrogen fixing micro-organism are: — Rhizobia
- Aspartame is the name of a product used by diabetic patients as sweetening agent. It belongs to the class of: — Peptides
- Why radiologists do not take direct X-ray photographs of intestine? — X-rays are not able to capture clear picture
- Exobiology deals with the study of: — Life in other planets and space
- A person with 'AB' blood group is sometimes called a universal recipient because of the: — lack of antibodies in his blood
- The normal temperature of human body on the Kelvin scale is: — 310 degree Kelvin
- Most of the desert plants bloom during night time because: — the desert insects are active during night time

- It is possible to produce seedless tomato fruits by: — spraying hormones on flowers
- Diabetes mellitus is caused due to deficiency of hormone insulin, secreted by: — Pancreas
- People drinking water from a shallow hand pump, are likely to suffer from all of the following diseases except: — Fluorosis
- Besides proteins and carbohydrates, other elements of nutritional value found in milk, include: — Calcium and Potassium
- Fat present below the skin surface in our body, acts as a barrier against: — loss of heat from the body
- Oxygen transportation in a human body takes place through: — Lungs, Blood and Tissue
- Corpus luteum is a mass of cells found in: — Ovary
- Alpha-keratin is a protein, present in: — Skin
- What is the average fat content of buffalo milk? — 7.2 %
- The major component of honey is: — Fructose
- Arteries supplying blood to the heart are called: — Coronary arteries
- Daily intake of proteins, recommended for a moderately active woman is: — 46 gram
- A tree species in Mauritius failed to reproduce because of the extinction of a fruit-eating bird. Which one of the following was that bird? — Dodo
- Which one of the following statements regarding starch and cellulose is correct? — Both of them are of plant origin
- Ergotism is due to consumption of: — Contaminated water
- The complete conversion of glucose, in the presence of oxygen, into carbon dioxide and water with release of energy is called: — Aerobic respiration
- The major chemical compound found in human kidney stones is: — Calcium oxalate
- The transfer of energy from one chemical substance to another depends on the size of energy ___ emitted from one substance. — Quanta
- The existence of characteristic energy levels for different chemical substances is useful for their identification by the analysis of ___ lines. — Spectral
- In optics, the ___ law relates the absorption of light to the properties of the material through which the light is traveling. — Beer–Lambert
- The term condensed matter physics was apparently coined by ___ when he renamed his research group — previously solid-state theory — in 1967. — Philip Anderson
- Dynamics are described in terms of matter particles exchanging messenger particles that carry the forces. These messenger particles are known as gluons; W- and W+ and Z bosons; and the ___, respectively. — Photons
- The Big Bang model rests on two theoretical pillars: Albert Einstein's general relativity and the ___ principle — Cosmological
- Chemically, DNA consists of two long polymers of simple units called nucleotides, with backbones made of sugars and phosphate groups joined by ___ bonds. — ester
- The ___ system is instrumental in regulating metabolism, growth, development, puberty, tissue function, internal environment (temperature, water balance, and ions) and also plays a part in determining mood. — endocrine
- ___ indicates the molecular weight of a compound and, from the fragmentation patterns, its structure. — Mass spectrometry
- Syphilis is a [illegible] rochetal bacterium Treponema pallidum subspecies ___. — pallidum
- Pertussis, also known as ___, is a highly contagious disease caused by the bacterium Bordetella pertussis. — whooping cough
- HIV infects primarily vital cells in the human immune system such as helper T cells (to be specific, CD4+ T cells), macrophages, and ___ cells. — dendritic
- Hepatitis B is a disease caused by hepatitis B virus (HBV) which infects the ___ of hominoidae, including humans, and causes an inflammation called hepatitis. — liver
- Momentum is a conserved quantity. Although originally seen to be due to Newton's laws, this law is also true in ___. — special relativity
- ___ is used in MRI and NMR machines, mass spectrometers, and the beam-steering magnets used in particle accelerators. — Superconductivity
- When superconductive, a material has an electrical resistance of exactly zero and no interior magnetic field (the ___ effect). — Meissner
- Superconductivity was discovered in 1911 by ___, who was studying the resistance of solid mercury at cryogenic temperatures using the recently-discovered liquid helium as a refrigerant. — Heike Kamerlingh Onnes
- Unit of Mass is defined as "the mass of a particular solid cylinder made of platinum-iridium alloy kept in ___, known as the International Prototype Kilogram". — Paris
- The turning effect produced by a force on a rigid body about a point, pivot or fulcrum is called the moment of a force or ___. — torque
- The ___ Barometer is an improved version of the simple mercury barometer. It gives more accurate reading of the atmospheric pressure because a vernier scale is used here. — Fortin
- The submarine is an application of ___. On surface, the submarine floats, with its conning tower and most of the deck, being clear of the water. — Archimedes Principle
- The front part of the eye is covered by a transparent spherical membrane called the ___. Light enters the eye through it. — cornea
- The space between the retina and eye lens is filled with a fluid called ___. It is a spot at which the optic nerve enters the eye and is insensitive to light and hence the name. — vitreous humor
- A compound is formed by combination of two or more elements in a definite proportion. For example, water is a compound of hydrogen and oxygen elements present in the ratio of ___. — 1 : 8
- A ___ is a solution in which the particle size ranges between 10^{-7} and 10^{-5} cm. For example, milk, blood, honey, smoke, ink, gum, starch solution etc. — colloid
- The outermost shell of an atom cannot accommodate more than 8 electrons, even if it has a capacity to accommodate more electrons. This is a very important rule and is also called the ___. — Octet Rule
- In ___, the Eleventh General Conference of Weights and Measures recommended an International System of Units (abbreviated as SI) based on the metric system of measurement. — 1960
- If the two forces acting on the body have the same line of action, then the moment becomes ___. — Zero

- Molecules are formed by combination of atoms. The number of atoms, which constitute one molecule of an element, is called its ___. — **atomicity**
- The cell theory first developed in 1839 by ___ and Theodor Schwann, states that all organisms are composed of one or more cells that all cells come from preexisting cells. — **Matthias Jakob Schleiden**
- ___ are self-replicating organelles that occur in various numbers, shapes, and sizes in the cytoplasm of all eukaryotic cells. — **Mitochondria**
- The cell nucleus is the most conspicuous organelle found in a eukaryotic cell. It houses the cell's chromosomes, and is the place where almost all DNA replication and RNA synthesis (___) occur. — **transcription**
- The function of the ___ is to conduct prepared food from the leaves to the growing parts of the plant and the storage organs. — **phloem**
- Acceleration is defined as the rate of change of velocity of a moving body with time. This change could be a change in the ___ or its direction of motion or both. — **speed of the object**
- An iron ball suspended from a hook by a wire has two forces acting on it, its weight, acting vertically downward and the ___ acting on the wire vertically upward. — **Tension**
- The fifth state refers to super cooled solid. Atoms lose their separate identity and get condensed. They behave like a single super atom. This study is based upon ___ condensation concept developed in 1924. — **Bose-Einstein**
- The ___ is a large complex of RNA and protein molecules. They each consist of two subunits, and act as an assembly line where RNA from the nucleus is used to synthesise proteins from amino acids. — **ribosome**
- The ___ is the transport network for molecules targeted for certain modifications and specific destinations, as compared to molecules that will float freely in the cytoplasm. — **endoplasmic reticulum**
- The point through which the resultant of the weights of all the particles of the body acts is called its ____. — **centre of gravity**
- The pressure exerted by a liquid on the base of the container depends on the vertical height of the liquid over it not on the area of ____. — **cross-section**
- Metals are generally solids with characteristics such as hardness, malleability, ductility high ____, luster and ability to conduct heat and electricity. — **tensile strength**
- Centrosomes are composed of two centrioles, which separate during cell division and help in the formation of the ___. — **mitotic spindle**
- ____ gave the idea of using names for species and he used a pattern where there were two words used in each name: a noun as a genus name and generally an adjective as a species name. — **Linnaeus**
- ___ which is found abundantly in stems of plants like hemp, jute and coconut, basically provides mechanical support to the plant by giving rigidity, flexibility and elasticity to the plant body. — **Sclerenchyma**
- Blood consists of fluid called plasma, which has red blood corpuscles (RBC), white blood corpuscles (WBC) and blood ___. — **platelets**
- The human skull shapes the head and face, protects the brain, and houses and protects special sense organs for taste, smell, hearing, vision, and balance. It is constructed from ____ bones. — **22**
- The ribs are curved, flat bones with a slightly twisted shaft. The ____ pairs of ribs form a ribcage that protects the heart, lungs, major blood vessels, stomach, liver, etc. — **12**
- Acquired Immuno Deficiency Syndrome" which is the medical expansion for AIDS was first detected in June 1981 in USA. The disease is caused by a ____- HIV (human immuno deficiency virus). — **retrovirus**
- Synthetic ____ are sodium salts of long chain benzene sulphonic acids or sodium salts of long chain alkyl hydrogen sulphates. — **Detergents**
- Petroleum is a mixture of a very large number of different hydrocarbons; the most commonly found molecules are alkanes (linear or branched), cycloalkanes, aromatic hydrocarbons, or more complicated chemicals like ____. — **Asphaltenes**
- In ____ motion the particle moves from one point in space to another which may be along a straight line or along a curved path. — **translator**
- ____ is the shortest distance covered by a moving object from the point of reference (initial position of the body), in a specified direction and so is a vector quantity. — **Displacement**
- A body is said to be moving with ____velocity if it covers unequal distances in equal intervals of time and vice-versa in a specified direction or if it changes the direction of motion. — **Variable**
- ____is that physical quantity which changes or tends to change a body's state of rest or of uniform motion in a straight line. — **Force**
- ____ deals with the study of cellular constituents like proteins, carbohydrates, lipids, and nucleic acids as also the chemical processes that occur in cells. — **Biochemistry**
- All ____ metals have one valence electron in their atom and so, their chemical properties are similar. — **alkali**
- The simplest version of a carbohydrate is a ____ which possesses the properties of carbon, hydrogen, and oxygen in a 1:2:1 ratio. — **monosaccharide**
- Vitamins are nutrients required in small amounts for essential metabolic reactions in the body which are broken down in nutrition as either ____ soluble (Vitamin C) or fat soluble (Vitamin E). — **water**
- Water-soluble vitamins dissolve easily in water, and in general, are readily excreted from the body, to the degree that ____ output is a strong predictor of vitamin consumption. — **Urinary**
- ____ is a 32-amino acid linear polypeptide hormone that is produced in humans primarily by the parafollicular cells (also known as C-cells) of the thyroid, and in many other animals in the ultimobranchial body. — **Calcitonin**
- RNA polymerase (RNAP or RNApol) is an enzyme that produces RNA. In cells, RNAP is needed for constructing RNA chains from DNA genes as templates, a process called ____. — **Transcription**
- Historically, vitamin ____ was discovered from its relationship to the disease pernicious anemia, which is an autoimmune disease that destroys parietal cells in the stomach that secrete intrinsic factor. — **B12**

- ____ Test is a sensitive chemical test for the presence of carbohydrates, based on the dehydration of the carbohydrate by sulfuric acid to produce an aldehyde. — **Molisch's**
- The ____ effect is the apparent change in the frequency of a wave motion when there is relative motion between the source of the waves and the observer. — **Doppler**
- ____ rays have the least penetrating power, move at a slower velocity than the other types, and are deflected slightly by a magnetic field in a direction that indicates a positive charge. — **Alpha**
- In humans there are 13 vitamins: 4 fat-soluble (____ and K) and 9 water-soluble (8 B vitamins and vitamin C). — **A, D, E**
- Malaria is a mosquito-borne infectious disease caused by a eukaryotic protist of the genus ____. — **Plasmodium**
- Thiamine is found in a wide variety of foods at low concentrations with ____ and pork being the most highly concentrated sources of thiamine. — **Yeast**
- Amino acids are molecules containing an ____ group, a carboxylic acid group and a side chain that varies between different amino acids. — **Amine**
- Pure water is ___, and can be considered either a very weak acid or a very weak base (center on the pH scale), giving it a pH of 7, or 0.0000001 M H^+. — **neutral**
- Esterification is a reversible reaction, with hydrolysis—literally "water splitting"—involves adding water and a catalyst (commonly NaOH) to an ester to get the sodium salt of the carboxylic acid and ____. — **Alcohol**
- ____ is a common solvent, able to dissolve paints, paint thinners, silicone sealants, many chemical reactants, rubber, printing ink, adhesives (glues), lacquers, leather anners, and disinfectants. — **Toluene**
- ____ Law states that for a parallel beam of monochromatic radiation passing through homogeneous solutions of equal concentration the absorbance is proportional to the path length. — **Lambert's**
- The transfer of energy from one chemical substance to another depends on the size of energy ___ emitted from one substance. — **Quanta**
- The existence of characteristic energy levels for different chemical substances is useful for their identification by the analysis of ___ lines. — **Spectral**
- In optics, the ___ law relates the absorption of light to the properties of the material through which the light is traveling. — **Beer–Lambert**
- Which law in chemistry states that at constant pressure, the volume of a given mass of an ideal gas increases or decreases by the same factor as its temperature (in Kelvin) increases or decreases? — **Charles's Law**
- The internal electronic energy changes of an atom are connected to the frequency of the corresponding emitted radiation by the formula $\epsilon = h.\nu$, with h the ____constant. — **Planck**
- Klinefelters syndrome results from the fusion of a normal ovum 22A+X with a non-disjunct sperm 22A+XY or a non-disjunct ovum 22A+XX with normal sperm ____. — **22A+Y**
- Turners Syndrome results from the fusion of an ovum 22A + X with an sperm with 22A, as a result of which, the genetic composition is ____. It develops into a female individual with rudimentary ovaries. — **44+ X0**
- ____ is a condition, which represents a change in chromosome number. Such a change is most commonly caused in the reproductive cells during the process of Gametogenesis. — **Aneuploidy**
- ____ (PKU) is a common metabolic disorder in growing children. A child suffering from PKU has defective legs and is usually unable to stand. Such a child may also be mentally retarded. — **Phenyl Ketonuria**
- Superconductivity was discovered in 1911 by ___, who was studying the resistance of solid mercury at cryogenic temperatures using the recently-discovered liquid helium as a refrigerant. — **Heike Kamerlingh Onnes**
- The minimum amount of the fissionable substance required so as to continue the chain reaction under a given set of conditions is called ___. — **critical mass**
- ____ observed that white light is split into seven colors and that the seven colors resemble the colors of a rainbow namely violet, indigo, blue, green, yellow, orange and red (VIBGYOR). — **Sir Isaac Newton**
- Conventionally, the electric current is said to flow from a higher potential to a lower potential while the ____ flow from a lower potential to a higher potential i.e., the electric current flows in a direction opposite to the flow of electrons. — **electrons**
- German physicist, ____ showed that the flow of an electric current through a wire depended on its 'resistance' and the potential difference between its ends. — **Georg Ohm**
- ____ is defined as the distance covered by a moving object in a particular direction in unit time or speed in a particular direction. — **Velocity**
- If an object moving with an initial velocity 'u' attain a final velocity 'v' in time 't', then acceleration 'a' produced in the object is Acceleration = ____ with time. — **Rate of change of velocity**
- When an object moves through a fluid, there will be friction due to the resistance of the material medium which ____ with the velocity of the body as in the case of a rocket and aeroplane. — **increases**
- Newton observed all material bodies' exhibit inability to change by themselves, their state of rest or of uniform motion in a straight line. This property is called ____. — **inertia**
- Law of Conservation of ____ states that if no external force acts on a system in a particular direction then the total momentum of the system in the direction remains unchanged. — **Momentum**
- Solubility is defined as the number of grams of a solute that dissolves in ____ of a solvent to form a saturated solution at a given temperature and pressure. — **100g**
- The total number of protons and neutrons present in one atom of an element is known as its ____ number. — **mass**
- If there are two objects of masses m_1 and m_2 separated by a distance d, the force acting between them is given by $F=Gm_1m_2/d^2$, where G is a constant of proportionality called the universal ____. — **gravitational constant**
- Kelvin Scale of Temperature was devised by Lord Kelvin (1824-1907); in this scale of temperature, zero of the scale corresponds to ____ C, which is said to be the temperature at which the volume of a gas reduces to zero. — **– 273°**
- If a bottle of perfume is opened in one corner of a room, it spreads in the whole room by ____. — **diffusion**
- A ____ wave is a disturbance, which does not require any material medium for its propagation and can travel even through vacuum. — **electromagnetic**

• Light is electromagnetic radiation, particularly radiation of a wavelength that is visible to the human eye (about 400–700 nm, or perhaps ____). — 380–750 nm

• ____ can be reduced by increasing area over which the thrust is exerted; this same principle explains why rear wheels of buses and trucks are usually double. — Pressure

• As one goes deeper in the swimming pool, the pressure on the ____ is found to increase. — ear drum

— Torricellian

• Red, green and blue are called primary colors or ____ primary colors because white is obtained when these colors are mixed. — additive

• When two or three primary colors are mixed in definite ratio we get new colors. That is, Red + Blue = Magenta; Blue + Green = Cyan (____); Red + Green = Yellow; Red + Green + Blue = White. — Peacock blue

• Colour deficiency is that defect of the eye due to which a person is not able to distinguish between certain colors mainly due to the malfunctioning or absence of a particular ____. — Cone

• The current passing through a conductor for a particular voltage depends on the property of the conductor called "resistance" which is measured in ____. — ohms

• Electrons in different metals can have different energies; if two of these metals are placed in a conducting liquid (____) a difference in electrical potential is set up between them. — electrolyte

• ____ is based on the principle that materials with opposite electrical charges attract one another and that some materials conduct electricity better after exposure to light. — Dry copying

• ____ are a type of unsaturated fat with trans-isomer bonds; these are rare in nature and in foods from natural sources; they are typically created in an industrial process called (partial) hydrogenation. — Trans fats

• When a charged body is brought near a conductor, the nearer end is induced with an opposite charge and a similar charge is induced on the farther end; this phenomenon is called ____. — electrostatic induction

• The projectile moves forward due to the horizontal force and downwards due to the force of gravity; the projectile follows a ____ since both the forces act simultaneously on it. — curved

• A body weighs more at the poles than at the equator and a body's weight will become ____ at the centre of the Earth as acceleration due to gravity is zero at the centre of the Earth. — zero

• Saturated fats have all of the carbon atoms in their fatty acid chains bonded to hydrogen atoms, whereas unsaturated fats have some of these carbon atoms ____-bonded. — double

• The amount of matter contained in a body does not change with time or from place to place i.e., ____ of a body remains the same throughout the universe. — mass

• Acceleration due to gravity is a vector quantity and is always directed towards the ____ of the Earth or any heavenly body; it does not depend on the mass m of the object. — centre

• When substances react, they do so by following certain laws; these laws are called the laws of chemical combination and formed the basis of ____ atomic theory of matter. — Dalton's

• In 1916, the American chemist ____ proposed that chemical bonds are formed between atoms because electrons from the atoms interact with each other. — Gilbert Newton Lewis

• Chronic ____, a type of chronic obstructive pulmonary disease, is characterized by the presence of a productive cough that lasts for three months or more per year for at least two years. — bronchitis

• ____ is the formation of excess fibrous connective tissue in an organ or tissue in a reparative or reactive process; this is as opposed to formation of fibrous tissue as a normal constituent of an organ or tissue. — Fibrosis

• Pulmonary ____ is fluid accumulation in the lungs which is due to either failure of the heart to remove fluid from the lung circulation or a direct injury to the lung parenchyma. — edema

• The electron is a subatomic particle carrying a negative electric charge, it has no known components or substructure, therefore, the electron is generally thought to be an ____ particle. — elementary

• By 1914, experiments by physicists Ernest Rutherford, Henry Moseley, James Franck and Gustav Hertz had largely established the structure of an atom as a dense nucleus of positive charge surrounded by ____ electrons. — lower-mass

• In physics and thermodynamics, heat is energy transferred from one place in a body or thermodynamic system to another place, or beyond the boundary of one system to another one due to thermal contact even when the systems are at different ____. — temperatures

• ____ are water-soluble vacuolar pigments that may appear red, purple, or blue according to pH. — Anthocyanins

• In common usage, an antibiotic is a substance or compound that kills, or inhibits the growth of ____. — bacteria

• ____, black quarter, quarter evil, quarter ill is an infectious bacterial disease of sheep and cattle, caused by Clostridium chauvoei bacteria. — Blackleg

• A ____ is a secreted or excreted chemical factor that triggers a social response in members of the same species. — pheromone

• The Gattermann reaction, named for the German chemist Ludwig Gattermann, in organic chemistry refers to a reaction of hydrocyanic acid with an ____ compound. — aromatic

• Flint glass is optical glass that has relatively high refractive index and low ____. — Abbe number

• Cell wall is found in plants, bacteria, fungi, algae, and some archaea. Animals and ____ do not have cell walls. — protozoa

• The cells develop in the bone marrow and circulate for about 100–120 days in the body before their components are recycled by ____. — macrophages

• The reactivity series is sometimes quoted in the strict reverse order of standard electrode potentials, when it is also known as the ____. — electrochemical series

• Rocks brought back from the moon during the Apollo 17 mission are composed of 12.1% ____. — TiO_2

• Wrought iron is an iron alloy with a very low carbon content, in comparison to steel, and has fibrous inclusions, known as ____. — slag

• Sodium carbonate (also known as washing soda, soda crystals or soda ash) is a sodium salt of carbonic acid. It is domestically well known for its everyday use as a ____. — water softener

• A halogen element is a reddish-brown volatile liquid at standard room temperature that is intermediate in reactivity between chlorine and iodine. What is it? — bromine

- What is known as "red brass" in USA? — Gun metal
- Ultraviolet (UV) light is electromagnetic radiation with a wavelength shorter than that of visible light, but longer than x-rays, in the range ____. — 10 nm to 400 nm
- The visible violet light has a wavelength of about 400 nm. The visible indigo light has a wavelength of about ____. — 445 nm
- Alpha decay reduces the atomic weight, or mass number, of a nucleus, while beta and ____ decay leave the mass number unchanged. Thus, the net effect of alpha radioactivity is to produce nuclei lighter than those of the original radioactive substance. — gamma
- In infrared photography, the film or image sensor used is sensitive to infrared light. The part of the spectrum used is referred to as near-infrared to distinguish it from far-infrared, which is the domain of ____. — thermal imaging
- The blue color of the sky is due to which physical phenomenon? — Rayleigh scattering
- If a lorry is travelling round a circular bend with uniform speed on a horizontal road, the resultant force acting on it must be directed to the centre. i.e. it must be the ____. — centripetal force
- Blood anti-coagulation is achieved mostly by heparin sulfate proteoglycans derived from ___ cells. — endothelial
- Phycocyanin is from the Greek phyco meaning "algae" and cyanin is from the English word "cyan", which is derived from the Greek "kyanos" and means. — blue-green
- The fats are hydrolyzed by the base, yielding alkali salts of fatty acids (crude soap) and ____. — glycerol
- For an aqueous solution to have a higher pH, a base must be dissolved in it, which binds away many of these rare ____. — hydrogen ions
- As an ____, potassium permanganate can act as a disinfectant. — oxidant
- ____ is the most cost-effective alloying material for iron, but various other alloying elements are used such as manganese, chromium, vanadium, and tungsten. — Carbon
- The ____ is commonly used in acoustics to quantify sound levels relative to some 0 dB reference. — decibel
- A reaction is feasible only if the total change in the ___ free energy is negative, if it is equal to zero the chemical reaction is said to be at equilibrium. — Gibbs
- Classical mechanics is a model of the physics of forces acting upon bodies. It is often referred to as "_____ mechanics". — Newtonian
- The periodic table of the chemical elements is a tabular method of displaying the chemical elements. Although precursors to this table exist, its invention is generally credited to which Russian chemist in 1869? — Dmitri Mendeleev
- What is a vertical column in the periodic table of the elements which is considered the most important method of classifying the elements? — Group
- The evolutionary history of the species which describes the characteristics of the various species from which it descended together with its genealogical relationship to every other species is called its _____. — phylogeny
- What studies the effects of changes in temperature, pressure, and volume on physical systems at the macroscopic scale, and the transfer of energy as heat? — Thermodynamics
- A hormone is a chemical messenger that carries a signal from one cell (or group of cells) to another via the blood. It is derived from a Greek word 'opur' which means _____. — Impetus
- An infectious disease is a disease resulting from the presence of pathogenic microbial agents, including pathogenic viruses, bacteria, fungi, protozoa, multi-cellular parasites, and aberrant proteins known as ___. — Prions
- Anton van Leeuwenhoek advanced the science of microscopy by being the first to observe microorganisms, allowing for easy visualization of ___. — bacteria
- Protists are mostly single-celled organisms that have a nucleus. They usually live in water. Examples of protists include some algae, paramecium, and ___. — amoeba
- The gravitational constant is an empirical physical constant involved in the calculation of the gravitational attraction between ___. It appears Einstein's theory of general relativity. — objects with mass
- The most abundant cells in blood are red blood cells which contain hemoglobin, an iron-containing _____, which facilitates transportation of oxygen by reversibly binding to this respiratory gas and greatly increasing its solubility in blood. — Protein
- The salivary glands in mammals are exocrine glands, glands with ducts that produce saliva. They also secrete ___, an enzyme that breaks down starch into glucose. — amylase
- Human erythrocytes are produced through a process named erythropoiesis, developing from committed stem cells to mature erythrocytes in about ____. — 7 days
- Positively charged cations (e.g. sodium cation Na+) and negatively charged anions (e.g. chloride Cl?) can form a crystalline lattice of neutral _____. — Salts
- The cholesterol contained in _____ occasionally accrete into lumps in the gallbladder, forming gallstones. — Bile
- The most convenient presentation of the chemical elements is in the periodic table of the chemical elements, which groups elements by ____. — Atomic Number
- The only known vertebrates without erythrocytes are the _____ which live in very oxygen rich cold water and transport oxygen freely dissolved in their blood. — Crocodile icefishes
- ___ Postulate is a hypothesis, derived from transition state theory, concerning the transition state of organic chemical reactions. — Hammond's
- ___, permittivity of free space or electric constant relates the units for electric charge to mechanical quantities such as length and force in the International System of Units. — Vacuum permittivity
- In physics, the space surrounding an electric charge or in the presence of a time-varying magnetic field has a property called an electric field. The concept of an electric field was introduced by ___. — Michael Faraday
- Monera are single-celled organisms that don't have a nucleus. ___ make up the entire kingdom. — Bacteria
- The discovery by ____ in 1931 that radio signals were emitted by celestial bodies initiated the science of radio astronomy. — Karl Jansky
- The human musculoskeletal system consists of the human skeleton, made by bones attached to other bones with joints, and skeletal muscle attached to the skeleton by ___. — tendons

- The most convenient presentation of the chemical elements is in the periodic table of the chemical elements, which groups elements by ____. — **atomic number**
- There are approximately ____ skeletal muscles within the typical human, and almost every muscle constitutes one part of a pair of identical bilateral muscles. — **640**
- ____ are self-replicating organelles that occur in various numbers, shapes, and sizes in the cytoplasm of all eukaryotic cells. — **Mitochondria**
- ____ are heterogeneous mixtures in which the particle size is too small to be seen with the naked eye, but is big enough to scatter light. — **Colloids**
- ____, a French chemist, was the first to establish an experimentally useful definition of an element. He defined an element as a basic form of matter that cannot be broken down into simpler substances by chemical reactions. — **Antoine Laurent Lavoisier**
- A chemical bond is a concept for understanding how atoms stick together in molecules. It may be visualized as the ____ balance between the positive charges in the nuclei and the negative charges oscillating about them. — **multipole**
- Existence of a chemical element in two or more forms differing in physical properties but giving rise to identical chemical compounds is known as ____. — **allotropy**
- Mitochondria are known as the powerhouses of the cell. The energy required for various chemical activities needed for life is released by mitochondria in the form of ATP (____) molecules. — **Adenosine triphopshate**
- The generally accepted definition of health is "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity", used by the World Health Organization (WHO) since ____. — **1948**
- The property possessed by certain crystalline substances of losing their water of crystallization when exposed to the air and becoming amorphous is called ____. — **efflorescence**
- The respiratory system consists of the nose, ____, trachea, and lungs. It brings oxygen from the air and excretes carbon dioxide and water back into the air. — **nasopharynx**
- The spaces in between the constituent particles and ____ of the particles are minimum in the case of solids, intermediate in liquids and maximum in gases. — **kinetic energy**
- The unique device developed by Timiryazev Agricultural Academy in Moscow, which can give reliable forewarning of natural calamities like floods and droughts, is ____. — **Bioceo compass**
- A capacitor (originally known as ____) is a passive two-terminal electrical component used to store energy in an electric field. — **Condenser**
- ____, otherwise known as electrical potential difference or electric tension is the electric potential difference between two points — or the difference in electric potential energy of a unit test charge transported between two points. — **Voltage**
- A ____ is an elementary particle, the quantum of light and all other forms of electromagnetic radiation, and the force carrier for the electromagnetic force. — **Photon**
- Blood transfusion is the process of receiving blood products into one's circulation intravenously. They are typically only recommended when a person's hemoglobin levels fall below ____. — **8g/dL**
- Hard water contains calcium and ____ ions that interfere with action of soap and contribute to the buildup of a scale or film of alkaline mineral deposits in household and industrial equipment and pipes. — **Magnesium**
- A vaccine typically contains an agent that resembles a disease-causing microorganism, and is often made from weakened or killed forms of the microbe, its toxins or one of its surface ____. — **Proteins**
- Five different and diverse types of White blood cells or leukocytes exist, but they are all produced and derived from a multi-potent cell in the bone marrow known as a hematopoietic ____. — **Stem Cell**
- Hydrochloric acid is a clear, colorless solution of hydrogen chloride (HCl) in water, a highly corrosive, strong mineral acid with many industrial uses, which is found naturally in ____. — **Gastric acid**
- Via which process is sodium chloride used to produce sodium carbonate which is used to produce glass, sodium bicarbonate, and dyes as well as a myriad of other chemicals? — **Solvay Process**
- The most common function of a ____ is to allow an electric current to pass in one direction, while blocking current in the opposite direction (the reverse direction). — **Diode**
- The refractive index of many materials (such as glass) varies with the wavelength or color of the light used, a phenomenon known as ____. — **Dispersion**
- The ____ principle is the quantum mechanical principle that no two identical fermions (particles with half-integer spin) may occupy the same quantum state simultaneously. — **Pauli exclusion principle**
- In printing, type metal (sometimes called hot metal) refers to the metal alloys used in traditional type founding and hot metal typesetting. What is the main constituent of these alloys? — **Lead**
- Table salt is refined salt, which contains about 97 to 99 percent sodium chloride. It usually contains substances that make it free-flowing (anticaking agents) such as sodium aluminosilicate or ____. — **Magnesium carbonate**
- Vaccines containing antigens are introduced into the body, stimulating the immune system response by instructing B cells, with assistance from T cells, to produce ____. — **Antibodies**
- As the intestine is a soft tissue structure, it is not usually seen on a plain X-ray. By using ____ to coat the inner lining of this area the Radiologist can see the bowel clearly on the X-ray screen, and can watch the way it functions during this study. — **Barium**
- What is the term for photoreceptor cells in the retina of the eye that are responsible for color vision, they function best in relatively bright light, as opposed to rod cells that work better in dim light? — **Cone cells**
- For fixed (point-to-point) services, communications satellites provide which relay technology complementary to that of communication cables? — **Microwave radio technology**
- What is the term for a type of stellar remnant that can result from the gravitational collapse of a massive star during a supernova event? — **Neutron Star**
- On the surface of the Earth, the escape velocity is about 11.2 kilometers per second (~6.96 mi/s), which is approximately how many times the speed of sound? — **34 times**

- At higher pressures and lower ____, deviations from the ideal gas behavior became noticeable, and the relationship between pressure and volume can only be accurately described employing real gas theory. — Temperatures
- Which is that element that increases the absorption of water and calcium in the plants and helps in the metabolic activities in plants? — Boron
- The mean normal blood glucose level in humans is about ____; however, this level fluctuates throughout the day. — 4 mM
- What is the word for a group of identical cells that share a common ancestry, meaning they are derived from the same mother cell? — Clone
- Which is that organic or inorganic material of natural or synthetic origin (other than liming materials) that is added to a soil to supply one or more plant nutrients essential to the growth of plants? — Fertilizer
- Which is an uniquely suitable gas for soft drinks because it is inert, non-toxic, and relatively inexpensive and easy to liquefy? — Carbon dioxide
- The protein fibre of ____ is composed mainly of fibroin and produced by certain insect larvae to form cocoons. — Silk
- Escape velocity is the minimum speed which a space craft must have to escape the earth's "Gravitational Pull". It is ___ km/sec. from the earth. — 11.2
- Atoms of the same element with the same atomic number but with different atomic mass number are known as Isotopes of that element. They contain different number of ___. — Neutrons
- Which component is used to produce Nitrolim, a widely used fertilizer in past? — Calcium Carbide and Nitrogen
- Which gas is produced whenever an alkali metal such as Lithium or Sodium reacts with water? — Calcium Carbide and Nitrogen Hydrogen
- Which cell organelle is essential for Cellular respiration, so vital to the existence of living beings? — Calcium Carbide and Nitrogen Mitochondrion
- Which daily appliance strictly works on the principle of dipole movement of the water molecules? — Microwave Oven
- Which waves are used in the gemstone industry to change white topaz into blue topaz? — Gamma Rays
- What is the term for that part of the "DTH Satellite dish" that converts the signals from electromagnetic or radio waves to electrical signals? — Low Noise Block Converter
- Which Vitamin is added to the milk in some countries as it is lost during the process of Fat Removal (Skimming)? — Vitamin A
- A tourist, who plans to visit a hill station located at very high altitude also wishes to take along his Television At very high altitudes, only Cathode Ray Tube TV and ___ can work. — LCD TV
- The elements which are found in Haemoglobin, Chlorophyll, Chalcopyrite & Vitamin B12 are respectively Iron. Magnesium, Copper, and ____. — Cobalt
- In which form is Protein in the pulses for more correctly legume) found? — Albumin
- The name of Karl Landsteiner is associated with the discovery of ____. — Human Blood Groups
- A molecule is a smallest part of matter which possesses all properties of original matter. A molecule is electrically ___. — Neutral
- A ray passing from denser to rarer medium and not able to pass to rarer medium at an angle greater than critical angle shows the phenomenon of ____. — Total Internal Reflection
- Equal volumes of all gases contain equal number of molecules under similar conditions of temperature and pressure. Which law says this? — Avogadro's Law
- Glycine max which is called Soya bean has high protein content as we all know. 100 g of Soyabean has how much of Protein? — 20-30 grams/100 gram
- Hepatitis A which is the most common cause of jaundice in young people is an infection of liver by ____. — Virus
- Leishmaniasis is a disease caused by protozoan parasites that belong to the genus Leishmania and is transmitted by the bite of certain species of ____. — Sand Fly
- Poliomyelitis known as Polio is caused by an enterovirus which causes paralysis of muscles. This virus has a particular affinity to the nerve cells of ___. — Spinal Cord
- Sickle cell anemia. Albinism. Color blindness, phenylketonuria, Klinefelter syndrome, Turner syndrome & Down syndrome are mainly grouped as ___. — Congenital diseases
- The chemical oxygen demand COD test is commonly used to measure amount of ___ in water. — Organic Compound
- Two Flat mirrors are placed at an angle of 60° from each other. How many images will be formed of a Candle placed in between them? — 5
- What will be the motion of a bullet which is fired horizontally from a Supersonic jet Fighter which is also moving Horizontal to surface of the Earth? — Projectile
- When light from some sources enters to the earth's atmosphere, it gets scattered. What causes this scattering? — Dust, smoke and gas molecules
- When the body's immune system cells destroy the insulin producing beta cells of the pancreas is termed as ____. — Type I diabetes
- When two mercury drops are brought into contact they form a single bigger drop to get minimum ____.— Surface Area
- Which action is in the process of a liquid rising in the syringe when the piston is pulled up? — Atmospheric Pressure
- Which term denotes the internal reaction force per unit area developed as a result of applied external force? — Stress
- ___ is the most common and the oldest method for waste disposal management, incineration is the second largest method for waste disposal management in most of the countries around the world. — Landfill
- ___ tyres create more friction with the road, increasing fuel consumption by up to ten per cent and are prone to skidding on either wet or slippery surfaces. — Under-inflated tyres
- ____ is the enzyme in nitrogen-fixing bacteria that catalyzes the conversion of atmospheric nitrogen into ammonia. — Nitrogenase
- Biogas or Gobar gas is produced by the ___ of biodegradable materials such as biomass, manure, sewage, municipal waste, green waste, plant material, and crops. — Anaerobic digestion

- Poliomyelitis, often called polio or infantile paralysis, is an acute, viral, infectious disease spread from person to person, primarily via the ___ route. — Fecal-oral
- Uranium-238 is fissionable by fast neutrons, and is fertile, meaning it can be transmuted to fissile ___ in a nuclear reactor. — Plutonium-239
- What is a partially vitreous by-product of the process of smelting ore, which separates the desired metal fraction from the unwanted fraction? — Slag
- What is a semiconductor device used to amplify and switch electronic signals and electrical power? — Transistor
- Which is the phenomenon of the eye by which an afterimage is thought to persist for approximately one twenty-fifth of a second on the retina? — Persistence of vision
- Which medical device uses electrical impulses, delivered by electrodes contacting the heart muscles, to initiate and regulate the beating of the heart? — Pacemaker
- Which white material produced by the calcination of bones is primarily composed of calcium phosphate? — Bone ash
- The heat content of anthracite ranges from 22 to 28 million ___ per short ton on a moist, mineral-matter-free basis. —Btu
- ___ are used in endoscopic instruments that enable doctors to view internal body parts without having to perform surgery. —Optical fibres
- Sound that is perceptible by humans has frequencies from about 20 Hz to 20,000 Hz. In air at standard temperature and pressure, the corresponding wavelengths of sound waves range from 17 m to ___. —17 mm
- Cane-sugar is carbohydrate and as this name implies, is composed of carbon, hydrogen and ___. —Oxygen
- A growth fertilizer has a high N content and relatively low P and K content. Which is the highest Nitrogen fertilizer one can buy? — Ammonium nitrate
- What is the chemical term for is a white solid that is crystalline but often appears as a fine powder; has a slightly salty and alkaline taste resembling that of washing soda? —Sodium bicarbonate
- An atomic pile is a nuclear reactor that uses controlled nuclear fission to generate energy. The most common reactor consists of a large assembly of ____. — Graphite
- Penicillin is produced from the genus of fungi "penicillia". All penicillin are ___ antibiotics and are used in the treatment of bacterial infections caused by susceptible, usually Gram-positive, organisms. —â-lactam
- Lymph is essentially recycled blood ___ after it has been filtered from the blood cells and returned to the lymphatic system. —Plasma
- Our bones and teeth are generally made up of Tri-calcium Phosphate which is calcium salt of ___. —Phosphoric acid
- What is the term for the scientific method of dating based on the analysis of patterns of tree rings, also known as growth rings? — Dendrochronology
- A certain sodium salt is most widely used in acidic foods such as salad dressings (vinegar), carbonated drinks (carbonic acid), jams and fruit juices (citric acid), pickles (vinegar), and condiments. What is it? —Sodium Benzoate
- A hydrocarbon compound containing carbon and hydrogen joined together in straight chains, branched trains or non-aromatic rings, is known as: — Aliphatic compound
- Which is a natural preservative/conservative used to add an acidic, or sour, taste to foods and soft drinks? — Citric Acid
- Which enzyme is located in the plasma membrane of virtually every human cell and is common to all cellular life? — Sodium-potassium pump
- The inheritance of acquired characteristics is a hypothesis that physiological changes acquired over the life of an organism (such as the enlargement of a muscle through repeated use). may be transmitted to offspring. It is also commonly referred to as the ____. — Theory of Adaptation
- Cements harden because of ___, chemical reactions that occur independently of the mixture's water content. — Hydration
- What is the term for chemical elements which have atomic numbers between 90 and 109 and inclusively occur between Groups 3 and 4 in Period 7 of the periodic table? — Actinides
- Which of the following diseases can be transmitted from one person to another through tattooing? — Hepatitis B and HIV-AIDS
- Many transplanted seedlings do not grow because most of the root hairs are lost during ___. — Transplantation
- The vegetation of hot desert climate is xerophytic type which has special characteristics to withstand very high rate of evaporation. They have: — long roots, thick barks, waxy leaves, thorns and little leaves
- Friction is independent of surface area of contact. However, it depends upon the nature of material of surfaces in contact, their roughness, smoothness and ___. — Inclination
- Size of the sun at dusk, Colour of the sun at dawn and Twinkle of stars in the sky are very good examples of: — Optical Illusion
- A rainbow is always formed in a direction opposite to that of the Sun. The water droplets act like small ____. — Prisms
- In which state of India is lion-tailed macaque found in its natural habitat? — Tamil Nadu, Kerala and Karnataka
- Mycorrhizal biotechnology has been used in rehabilitating degraded sites because Mycorrhiza enables the plants to resist drought and increase absorptive area, tolerate extremes of PH, and ____. — Resist disease infestation
- Niter is the mineral form of potassium nitrate, KNO_3, also known as: — Saltpeter
- The oral polio vaccine (OPV), also called "trivalent oral polio vaccine" or "Sabin vaccine", consists of a mixture of live, attenuated (weakened) poliovirus strains of all three poliovirus types. It was developed in 1961 by ____. — Albert Sabin
- Calcium is a mineral not only essential for bone health, but it is also required for muscular contraction. Which mineral aids in nerve transmission and muscle contraction? — Sodium
- Which is a highly contagious but non-threatening disease caused by primary infection with varicella zoster virus (VZV)? — Chickenpox
- What are used to construct gyrocompasses, which complement or replace magnetic compasses (in ships, aircraft and spacecraft, vehicles in general) and to assist in stability? — Gyroscopes

- Which device converts signals produced by one type of device (as a computer) to a form compatible with another (as a telephone)? — **Modem**
- Vitamin D_3 is produced by ultraviolet irradiation (UV) of its precursor 7-dehydrocholesterol. By which other name is it known? — **Cholecalciferol**
- Caecum is a pouch that is considered to be the beginning of the large intestine. The pylorus is the region of the stomach that connects to the ____. — **Duodenum**
- What is the term for collection of techniques used to maintain or grow plant cells, tissues or organs under sterile conditions on a nutrient culture medium of known composition? — **Plant tissue culture**
- The ____ plays a key role in memory, attention, perceptual awareness, thought, language, and consciousness. — **Cerebral cortex**
- Paraffin wax refers to a white or colourless soft solid that is used as a lubricant and for other applications. It is derived from: — **Petroleum**
- What is the term for a dimensionless quantity representing the ratio of speed of an object moving through a fluid and the local speed of sound? — **Mach Number**
- If force is expressed in Newton and the distance in meter, then the work done is expressed in: — **Joule**
- The volume of which of the following materials decreases when it is heated from 0°C to 5°C? — **Water**
- 'Archaeopteryx' is a connecting link between which of the following classes of animal? — **Reptilia and Aves**
- Pearl is mainly constituted of: — **Calcium Carbonate**
- When a person enters in a dark room from strong light area, he is not able to see clearly for some time. Later he gradually begins to see things. This is because: — **Eyes become familiar with darkness in course of time**
- For which desirable character the transgenic crop 'Golden Rice' is produced? — **Vitamin A**
- Increasing the amount of pesticides in the organisms of successive trophic level is known as: — **Bio-magnification**
- Purified ____ is a semiconductor, with appearance most similar to elemental silicon and naturally reacts and forms complexes with oxygen in nature. — **Germanium**
- Polytetrafluoroethylene (PTFE) is a synthetic fluoropolymer of tetrafluoroethylene that finds numerous applications. The best known brand name of PTFE is: — **Teflon**
- Which gas comprises primarily methane (CH_4) and carbon dioxide (CO_2) and may have small amounts of hydrogen sulphide (H_2S), moisture and siloxanes? — **Gobar Gas**
- Seaweed is a source of iodine, necessary for thyroid function and to prevent: — **Goitre**
- Echoes from the waves are analyzed by computer to produce a moving or still picture, called a ____, on a screen. — **Sonogram**
- The middle ear contains three tiny bones known as the ossicles: malleus, incus, and: — **Stapes**
- One cup of cooked spinach provides one with 6.5 mg of which element/metal which is an essential mineral needed by the human body and is a component of many proteins, including hemoglobin? — **Iron**
- Which has the distinction of being the only naturally occurring fissile isotope? — **Uranium-235**
- Which is a predatory arthropod animal, easily recognized by the pair of grasping claws and the narrow, segmented tail, often carried in a characteristic forward curve over the back, ending with a venomous stinger? — **Scorpion**
- Starch or ____ is a carbohydrate consisting of a large number of glucose units joined by glycosidic bonds. — **Amylum**
- Which physical phenomenon was scientifically determined that a frame rate of less than 16 frames per second (frame/s) caused the mind to see flashing images? — **Persistence of Vision**
- Which technique allows the temperature to be lowered so far that food can be stored for days or even months? — **Refrigeration**
- At either end (both the generator and at the loads), voltage levels are reduced by ____ for safer operation and less expensive equipment. — **Transformers**
- Electricity is transmitted at high voltages to reduce the energy lost in long-distance transmission. What does high voltage signify here? — **110 kV or above**
- Which instrument converts sound energy to electrical energy which is used as an output using same energy level amplified or it could be used to record those same energy output and pattern too be played again? — **Microphone**
- Which type of radiation is used to kill microorganisms, molds and fungus in various environmental applications? — **Ultraviolet radiation**
- Of the three mediums (gas, liquid, and solid) which type of waves travel the slowest through gases, faster through liquids, and fastest through solids? — **Sound waves**
- ___ are usually motionless organisms that absorb nutrients for survival. They include mushrooms, molds, and yeasts. — **Fungi**
- ____ studies the distribution and abundance of living organisms, and the interactions between organisms and their environment. — **Ecology**
- Protists are mostly single-celled organisms that have a nucleus. They usually live in water. Examples of protists include some algae, paramecium, and ___. — **amoeba**
- The conductivity of an atom is dependent on the "free motion" of its loosely bound: — **electrons**
- The first series in cellular respiration is glycolysis, the breakdown of glucose. In this step, the enzyme hexokinase phosphorylates adds a phosphate group to glucose in the cell's: — **Cytoplasm**
- The theory of special relativity was proposed in ____ by Albert Einstein in his article "On the Electrodynamics of Moving Bodies". — **1905**
- The total complement of genes in an organism or cell is known as its ____ which is stored on one or more chromosomes. — **genome**
- Typhoid fever is an infectious disease caused by the bacteria Salmonella typhi. It is also known as: — — **Enteric fever**
- The human musculoskeletal system consists of the human skeleton, made by bones attached to other bones with joints, and skeletal muscle attached to the skeleton by: — **Tendons**
- What is the amount of a substance that contains as many elementary entities as there are atoms in 0.012 kilogram (or 12 grams) of carbon-12? — **Mole**
- Who was the first man to ever use the term human biology? — **Ernst Freiherr von Blomberg**