

SSC CGL Biology PYQ Master Set

Q.1) Which hormone is responsible for regulating blood calcium levels in humans?

Answer: Parathyroid hormone

Explanation: Parathyroid hormone (PTH) is secreted by the parathyroid glands and increases blood calcium levels by stimulating bone resorption, increasing calcium reabsorption in kidneys, and promoting vitamin D activation for better calcium absorption from the intestines.

Q.2) Which part of the brain controls voluntary muscular movements?

Answer: Cerebrum

Explanation: The cerebrum, particularly the motor cortex located in the frontal lobe, is responsible for controlling voluntary muscle movements. It processes motor commands and sends signals to skeletal muscles to execute precise movements.

Q.3) Which structure in the human body is responsible for the filtration of blood in kidneys?

Answer: Nephron

Explanation: Nephrons are the functional units of the kidney. Each nephron consists of a glomerulus and renal tubule, where blood filtration, reabsorption, and secretion take place to form urine.

Q.4) What is the primary function of hemoglobin in human blood?

Answer: Transport of oxygen

Explanation: Hemoglobin is a red pigment in red blood cells that binds with oxygen in the lungs and transports it to tissues throughout the body. It also helps in transporting some carbon dioxide back to the lungs for exhalation.

Q.5) Which vitamin deficiency causes night blindness?

Answer: Vitamin A

Explanation: Night blindness (nyctalopia) is caused by a deficiency of vitamin A, which is essential for the formation of rhodopsin, a pigment in the retina required for vision in low light conditions.

Q.6) Which plant tissue is responsible for the transport of water in plants?

Answer: Xylem

Explanation: Xylem is a vascular tissue in plants that conducts water and dissolved minerals from the roots to the rest of the plant. It is made up of tracheids and vessel elements.

Q.7) Which organ is responsible for detoxifying harmful substances in the human body?

Answer: Liver

Explanation: The liver detoxifies various metabolites, synthesizes proteins, and produces biochemicals necessary for digestion. It converts harmful substances like ammonia into urea and breaks down toxins and drugs.

Q.8) What type of joint is found in the shoulder of a human?

Answer: Ball and socket joint

Explanation: The shoulder joint is a ball and socket type of synovial joint that allows movement in almost all directions, making it the most mobile joint in the human body.

Q.9) What is the main function of white blood cells (WBCs)?

Answer: Defence against infection

Explanation: WBCs are part of the immune system and help the body fight

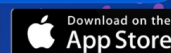


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infections by attacking bacteria, viruses, and other foreign invaders through phagocytosis, antibody production, and immune response modulation.

Q.10) Which part of the plant is involved in transpiration?

Answer: Stomata

Explanation: Stomata are small pores located mainly on the underside of leaves. They regulate gas exchange and water vapor loss during transpiration by opening and closing in response to environmental conditions.

Q.11) Which part of the eye controls the amount of light entering the eye?

Answer: Iris

Explanation: The iris is the colored part of the eye that surrounds the pupil and regulates the amount of light that enters by adjusting the size of the pupil in response to brightness.

Q.12) Which blood group is known as the universal donor?

Answer: O negative

Explanation: O negative blood lacks A, B, and Rh antigens, making it universally compatible for transfusions into any blood type without immune rejection.

Q.13) Which organelle is responsible for cellular respiration in animal cells?

Answer: Mitochondria

Explanation: Mitochondria are known as the "powerhouse of the cell" because they produce energy (ATP) through the process of cellular respiration using glucose and oxygen.

Q.14) Which enzyme is secreted by the stomach to aid in protein digestion?

Answer: Pepsin

Explanation: Pepsin is a digestive enzyme activated in the acidic environment of the stomach and breaks down proteins into smaller peptides.

Q.15) What is the genetic material in most living organisms?

Answer: DNA

Explanation: Deoxyribonucleic acid (DNA) stores genetic information in the form of a double helix and controls inheritance and cellular functions in most organisms.

Q.16) Which vitamin is synthesized in the human body upon exposure to sunlight?

Answer: Vitamin D

Explanation: Vitamin D is synthesized in the skin when it is exposed to ultraviolet B (UVB) rays from sunlight, playing a crucial role in calcium absorption and bone health.

Q.17) Which disease is caused by the deficiency of insulin hormone?

Answer: Diabetes mellitus

Explanation: Diabetes mellitus occurs when the pancreas fails to produce enough insulin or the body cannot effectively use the insulin produced, resulting in high blood sugar levels.

Q.18) Which part of the human body produces red blood cells?

Answer: Bone marrow

Explanation: Red bone marrow, found in certain bones like the femur and pelvis, is the primary site of red blood cell production through the process called erythropoiesis.

Q.19) Which pigment gives green color to plants?

Answer: Chlorophyll

Explanation: Chlorophyll absorbs light most efficiently in the blue and red

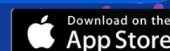


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wavelengths and reflects green light, which gives plants their characteristic green color.

Q.20) Which disease is transmitted by the bite of a female Anopheles mosquito?

Answer: Malaria

Explanation: Malaria is caused by Plasmodium parasites transmitted through the bite of an infected female Anopheles mosquito. It affects red blood cells and can be fatal without treatment.

Q.21) What is the function of platelets in the blood?

Answer: Blood clotting

Explanation: Platelets are cell fragments that aggregate at the site of blood vessel injury and release chemicals to initiate the clotting process, preventing excessive blood loss.

Q.22) Which gland is known as the master gland of the human body?

Answer: Pituitary gland

Explanation: The pituitary gland controls the functions of many other endocrine glands and regulates growth, metabolism, reproduction, and stress responses through hormone secretion.

Q.23) Which protein is found in hair and nails?

Answer: Keratin

Explanation: Keratin is a strong, fibrous structural protein that forms the main component of hair, nails, and the outer layer of skin, providing protection and strength.

Q.24) Which organ regulates the body temperature in humans?

Answer: Hypothalamus

Explanation: The hypothalamus is a

region in the brain that maintains homeostasis and regulates body temperature through mechanisms like sweating or shivering.

Q.25) Which disease is caused by the deficiency of Vitamin C?

Answer: Scurvy

Explanation: Scurvy results from a deficiency of vitamin C, leading to symptoms like bleeding gums, joint pain, and weakness due to impaired collagen synthesis.

Q.26) What is the function of the cerebellum in the human brain?

Answer: Coordination of movement and balance

Explanation: The cerebellum processes sensory information and coordinates voluntary movements such as posture, balance, and motor learning.

Q.27) Which process in plants involves the release of oxygen?

Answer: Photosynthesis

Explanation: During photosynthesis, plants convert carbon dioxide and water into glucose using sunlight, releasing oxygen as a byproduct.

Q.28) Which disease is caused by the deficiency of iodine?

Answer: Goitre

Explanation: Iodine deficiency leads to the enlargement of the thyroid gland (goitre) because iodine is essential for the synthesis of thyroid hormones.

Q.29) Which component of blood helps in fighting infections?

Answer: White blood cells

Explanation: White blood cells (leukocytes) are the body's main defence against pathogens, producing antibodies and engulfing foreign invaders.

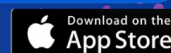


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Q.30) Which part of the digestive system is responsible for nutrient absorption?

Answer: Small intestine

Explanation: The small intestine, particularly the jejunum and ileum, is where most nutrients from digested food are absorbed into the bloodstream.

Q.31) Which gas is produced during photosynthesis?

Answer: Oxygen

Explanation: During the light reaction of photosynthesis, water molecules are split, releasing oxygen as a byproduct while producing ATP and NADPH.

Q.32) Which part of the brain is responsible for vision?

Answer: Occipital lobe

Explanation: The occipital lobe of the cerebrum processes visual information received from the eyes via the optic nerve.

Q.33) What is the scientific name of the human being?

Answer: Homo sapiens

Explanation: "Homo sapiens" is the binomial nomenclature used for modern humans, classified under the genus Homo and species sapiens.

Q.34) Which hormone is known as the 'fight or flight' hormone?

Answer: Adrenaline

Explanation: Adrenaline (epinephrine), secreted by the adrenal medulla, prepares the body to respond to stress by increasing heart rate, blood pressure, and energy supply.

Q.35) Which mineral is essential for blood clotting?

Answer: Calcium

Explanation: Calcium ions play a vital

role in the clotting cascade by facilitating the activation of various clotting factors needed to form a stable clot.

Q.36) What is the structural and functional unit of the nervous system?

Answer: Neuron

Explanation: Neurons are specialized nerve cells that transmit electrical and chemical signals throughout the nervous system, forming its structural and functional core.

Q.37) Which disease is caused by a virus affecting the liver?

Answer: Hepatitis

Explanation: Hepatitis is an inflammation of the liver caused by viruses like Hepatitis A, B, C, D, or E. It can be acute or chronic, affecting liver function.

Q.38) Which vitamin helps in blood clotting?

Answer: Vitamin K

Explanation: Vitamin K is essential for the synthesis of clotting factors like prothrombin, which are required for the blood coagulation process.

Q.39) Which part of the ear maintains balance and equilibrium?

Answer: Semicircular canals

Explanation: The semicircular canals in the inner ear detect rotational movements and help maintain body balance through fluid motion and sensory hair cells.

Q.40) Which hormone stimulates the production of milk in females after childbirth?

Answer: Prolactin

Explanation: Prolactin is secreted by the anterior pituitary gland and

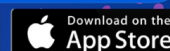


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promotes milk production in the mammary glands following childbirth.

Q.41) Which type of muscle is found in the walls of internal organs?

Answer: Smooth muscle

Explanation: Smooth muscles are involuntary, non-striated muscles found in internal organs like the stomach, intestines, and blood vessels, controlling movement automatically.

Q.42) Which microorganism is used in the production of alcohol?

Answer: Yeast

Explanation: Yeast, especially *Saccharomyces cerevisiae*, ferments sugars into ethanol and carbon dioxide, playing a key role in alcohol production and baking.

Q.43) What is the function of the enzyme amylase?

Answer: Breakdown of starch

Explanation: Amylase is an enzyme secreted by the salivary glands and pancreas that breaks down complex carbohydrates (starch) into simpler sugars like maltose.

Q.44) Which system in the human body is responsible for transporting oxygen and nutrients?

Answer: Circulatory system

Explanation: The circulatory system, comprising the heart, blood, and blood vessels, transports oxygen, nutrients, hormones, and waste products throughout the body.

Q.45) Which part of the plant is responsible for reproduction?

Answer: Flower

Explanation: Flowers are the reproductive structures of angiosperms and contain male (stamens) and female

(carpels) organs necessary for pollination and fertilization.

Q.46) Which gland secretes melatonin?

Answer: Pineal gland

Explanation: The pineal gland is a small endocrine gland in the brain that secretes melatonin, a hormone that regulates sleep-wake cycles (circadian rhythms).

Q.47) Which vitamin is necessary for proper vision, especially night vision?

Answer: Vitamin A

Explanation: Vitamin A is vital for the synthesis of rhodopsin in rod cells of the retina, which is necessary for vision in dim light.

Q.48) Which part of the plant conducts food from leaves to other parts?

Answer: Phloem

Explanation: Phloem is a vascular tissue that transports food, primarily sucrose, produced in the leaves during photosynthesis to other parts of the plant.

Q.49) Which disease is caused by Plasmodium parasite?

Answer: Malaria

Explanation: Plasmodium, transmitted by female Anopheles mosquitoes, invades red blood cells and liver cells, leading to cycles of fever, chills, and anemia.

Q.50) Which organ produces bile in the human body?

Answer: Liver

Explanation: The liver produces bile, which is stored in the gallbladder and released into the small intestine to emulsify fats and aid in digestion.

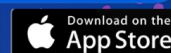


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Q.51) Which blood vessel carries oxygenated blood from the lungs to the heart?

Answer: Pulmonary vein

Explanation: The pulmonary veins carry oxygen-rich blood from the lungs to the left atrium of the heart, unlike other veins which carry deoxygenated blood.

Q.52) What is the primary function of the large intestine in the human digestive system?

Answer: Absorption of water and formation of feces

Explanation: The large intestine absorbs water and electrolytes from indigestible food residue and compacts it into feces for elimination.

Q.53) Which vitamin deficiency causes beriberi disease?

Answer: Vitamin B1 (Thiamine)

Explanation: Beriberi results from thiamine deficiency, affecting the nervous and cardiovascular systems, leading to weakness, nerve degeneration, and edema.

Q.54) Which cells in the pancreas secrete insulin?

Answer: Beta cells of the islets of Langerhans

Explanation: Beta cells produce insulin, a hormone that regulates blood glucose levels by promoting cellular glucose uptake and storage.

Q.55) Which organelle is responsible for protein synthesis in the cell?

Answer: Ribosome

Explanation: Ribosomes translate messenger RNA into polypeptide chains, making them the site of protein synthesis in cells.

Q.56) What type of blood cells increase in number during allergic

reactions?

Answer: Eosinophils

Explanation: Eosinophils combat parasites and mediate allergic responses by releasing inflammatory chemicals.

Q.57) Which hormone regulates the sleep-wake cycle?

Answer: Melatonin

Explanation: Melatonin, secreted by the pineal gland, helps regulate circadian rhythms, including sleep patterns.

Q.58) What is the primary function of the diaphragm in humans?

Answer: Facilitate breathing by changing thoracic volume

Explanation: The diaphragm contracts to increase chest cavity volume during inhalation and relaxes during exhalation, enabling lung expansion and air movement.

Q.59) Which vitamin deficiency leads to rickets in children?

Answer: Vitamin D

Explanation: Vitamin D deficiency impairs calcium absorption, causing weak and deformed bones, characteristic of rickets.

Q.60) What is the functional unit of the kidney?

Answer: Nephron

Explanation: The nephron filters blood, reabsorbs needed substances, and forms urine, maintaining homeostasis.

Q.61) Which vitamin deficiency causes pernicious anemia?

Answer: Vitamin B12

Explanation: Vitamin B12 deficiency impairs red blood cell formation, causing anemia characterized by large, immature red blood cells.

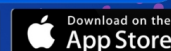


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Q.62) Which is the largest gland in the human body?

Answer: Liver

Explanation: The liver is the largest internal organ and gland, responsible for metabolism, detoxification, and bile production.

Q.63) Which type of blood vessel carries blood away from the heart?

Answer: Artery

Explanation: Arteries carry oxygenated blood from the heart to tissues (except pulmonary artery, which carries deoxygenated blood to lungs).

Q.64) Which vitamin is essential for blood clotting?

Answer: Vitamin K

Explanation: Vitamin K is necessary for synthesizing clotting factors that prevent excessive bleeding.

Q.65) Which component of blood carries oxygen?

Answer: Red blood cells (RBCs)

Explanation: RBCs contain hemoglobin, which binds oxygen for transport to tissues.

Q.66) Which plant hormone promotes cell elongation?

Answer: Auxins

Explanation: Auxins stimulate cell elongation, root formation, and growth responses in plants.

Q.67) Which part of the brain controls heartbeat and respiration?

Answer: Medulla oblongata

Explanation: The medulla regulates vital autonomic functions like heart rate, breathing, and blood pressure.

Q.68) Which vitamin helps in absorption of calcium and phosphorus?

Answer: Vitamin D

Explanation: Vitamin D promotes absorption of calcium and phosphorus, essential for bone health.

Q.69) Which is the powerhouse of the cell?

Answer: Mitochondria

Explanation: Mitochondria generate ATP through cellular respiration, supplying energy for cellular functions.

Q.70) Which component of blood is involved in immune response?

Answer: White blood cells (WBCs)

Explanation: WBCs protect the body by attacking pathogens and foreign substances.

Q.71) Which organelle contains digestive enzymes in the cell?

Answer: Lysosome

Explanation: Lysosomes digest waste materials and cellular debris using hydrolytic enzymes.

Q.72) What is the chemical messenger released by neurons to transmit impulses?

Answer: Neurotransmitter

Explanation: Neurotransmitters like acetylcholine and dopamine transmit signals across synapses between neurons.

Q.73) Which vitamin deficiency causes scurvy?

Answer: Vitamin C

Explanation: Lack of vitamin C leads to defective collagen synthesis, causing gum bleeding and delayed wound healing.

Q.74) Which gas is essential for respiration in humans?

Answer: Oxygen

Explanation: Oxygen is required for



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cellular respiration to produce ATP by oxidizing glucose.

Q.75) Which blood component is responsible for clotting?

Answer: Platelets

Explanation: Platelets initiate blood clot formation by aggregating and releasing clotting factors.

Q.76) Which muscle type is voluntary and striated?

Answer: Skeletal muscle

Explanation: Skeletal muscles are attached to bones, control voluntary movement, and have a striated appearance.

Q.77) Which vitamin is important for vision and skin health?

Answer: Vitamin A

Explanation: Vitamin A supports retinal function and epithelial tissue maintenance.

Q.78) What is the name of the protein that stores oxygen in muscle cells?

Answer: Myoglobin

Explanation: Myoglobin binds oxygen within muscle tissues, facilitating oxygen supply during muscle activity.

Q.79) Which blood vessel has valves to prevent backflow?

Answer: Veins

Explanation: Veins have valves to ensure one-way blood flow back to the heart.

Q.80) Which part of the cell controls cell division?

Answer: Nucleus

Explanation: The nucleus contains DNA and controls cellular activities including division through regulation of the cell cycle.

Q.81) Which vitamin deficiency causes pellagra?

Answer: Niacin (Vitamin B3)

Explanation: Pellagra results from niacin deficiency, causing dermatitis, diarrhea, and dementia.

Q.82) Which organ filters and detoxifies blood in the human body?

Answer: Liver

Explanation: The liver removes toxins, metabolizes drugs, and produces bile for digestion.

Q.83) Which hormone regulates water balance in the human body?

Answer: Antidiuretic hormone (ADH)

Explanation: ADH controls water retention by increasing permeability of kidney tubules, reducing urine output.

Q.84) Which component of blood is responsible for transporting hormones?

Answer: Plasma

Explanation: Plasma carries hormones, nutrients, waste products, and gases throughout the body.

Q.85) What is the term for a plant's response to light?

Answer: Phototropism

Explanation: Phototropism is the directional growth of plants toward or away from light stimuli.

Q.86) Which organ is responsible for producing bile?

Answer: Liver

Explanation: The liver produces bile that aids in emulsification and digestion of fats.

Q.87) What is the main function of red blood cells?

Answer: Transport oxygen

Explanation: RBCs carry oxygen from

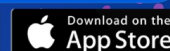


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lungs to tissues and carbon dioxide back to lungs.

Q.88) Which vitamin is essential for the synthesis of collagen?

Answer: Vitamin C

Explanation: Vitamin C is a cofactor in collagen biosynthesis, important for skin, cartilage, and bone.

Q.89) Which part of the neuron receives signals?

Answer: Dendrites

Explanation: Dendrites receive electrical signals from other neurons and transmit them to the cell body.

Q.90) Which plant hormone regulates seed dormancy?

Answer: Absciscic acid (ABA)

Explanation: ABA promotes seed dormancy and inhibits germination under unfavorable conditions.

Q.91) Which disease is caused by the bacterium Mycobacterium tuberculosis?

Answer: Tuberculosis

Explanation: Tuberculosis primarily affects the lungs and spreads via airborne droplets.

Q.92) Which part of the human brain regulates emotions?

Answer: Limbic system

Explanation: The limbic system includes structures like the amygdala and hippocampus, involved in emotion and memory.

Q.93) Which vitamin deficiency causes rickets?

Answer: Vitamin D

Explanation: Vitamin D deficiency leads to defective bone mineralization causing rickets in children.

Q.94) What is the name of the pigment responsible for red color in blood?

Answer: Hemoglobin

Explanation: Hemoglobin contains iron that binds oxygen and gives blood its red color.

Q.95) Which hormone controls metabolism in the human body?

Answer: Thyroxine

Explanation: Thyroxine (T4) from the thyroid gland regulates metabolic rate and energy production.

Q.96) Which blood cells are involved in allergic reactions?

Answer: Basophils

Explanation: Basophils release histamine and other chemicals during allergic responses.

Q.97) Which organ is involved in the production of digestive enzymes like trypsin?

Answer: Pancreas

Explanation: The pancreas secretes enzymes including trypsin to digest proteins in the small intestine.

Q.98) Which vitamin is important for red blood cell formation?

Answer: Vitamin B12

Explanation: Vitamin B12 is essential for DNA synthesis in RBC precursors, preventing anemia.

Q.99) Which is the longest bone in the human body?

Answer: Femur

Explanation: The femur or thigh bone is the longest and strongest bone in the human skeleton.

Q.100) Which organ system controls body functions through hormones?

Answer: Endocrine system

Explanation: The endocrine system

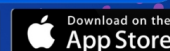


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releases hormones that regulate growth, metabolism, reproduction, and homeostasis.

Q.101) What is the process by which green plants make their food?

Answer: Photosynthesis

Explanation: Photosynthesis is the process in which plants use sunlight, carbon dioxide, and water to produce glucose and oxygen, primarily occurring in chloroplasts.

Q.102) Which hormone regulates the menstrual cycle in females?

Answer: Estrogen

Explanation: Estrogen is a female sex hormone responsible for regulating the menstrual cycle and secondary sexual characteristics.

Q.103) What is the function of the alveoli in the lungs?

Answer: Gas exchange

Explanation: Alveoli are tiny air sacs in lungs where oxygen diffuses into the blood and carbon dioxide diffuses out, facilitating respiration.

Q.104) Which disease is caused by the deficiency of folic acid?

Answer: Neural tube defects

Explanation: Folic acid deficiency during pregnancy can lead to neural tube defects like spina bifida in the developing fetus.

Q.105) What is the main function of the pancreas?

Answer: Secretion of digestive enzymes and hormones

Explanation: The pancreas produces digestive enzymes like amylase and lipase and hormones like insulin and glucagon to regulate blood sugar.

Q.106) Which part of the cell controls genetic information?

Answer: Nucleus

Explanation: The nucleus contains DNA, which carries genetic instructions for growth, development, and reproduction.

Q.107) What is the structural carbohydrate found in the cell wall of plants?

Answer: Cellulose

Explanation: Cellulose provides rigidity and strength to plant cell walls; it is a polysaccharide composed of glucose units.

Q.108) Which vitamin deficiency leads to pellagra?

Answer: Niacin (Vitamin B3)

Explanation: Pellagra is characterized by dermatitis, diarrhea, and dementia, caused by niacin deficiency.

Q.109) Which blood cells are primarily involved in clot formation?

Answer: Platelets

Explanation: Platelets aggregate at injury sites to form clots and prevent bleeding.

Q.110) What is the main excretory product in humans?

Answer: Urea

Explanation: Urea is produced in the liver through the breakdown of amino acids and excreted by kidneys.

Q.111) Which hormone increases blood sugar levels?

Answer: Glucagon

Explanation: Glucagon, secreted by alpha cells of the pancreas, raises blood glucose by promoting glycogen breakdown in the liver.

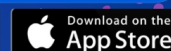


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Q.112) Which pigment is responsible for red color in red blood cells?

Answer: Hemoglobin

Explanation: Hemoglobin binds oxygen and gives red blood cells their characteristic red color.

Q.113) What type of reproduction is seen in bacteria?

Answer: Binary fission

Explanation: Bacteria reproduce asexually by splitting into two identical daughter cells.

Q.114) Which organ in humans produces bile?

Answer: Liver

Explanation: The liver produces bile, which emulsifies fats for digestion.

Q.115) What is the function of the ribosome?

Answer: Protein synthesis

Explanation: Ribosomes translate mRNA into amino acid sequences, synthesizing proteins.

Q.116) Which hormone controls water balance in kidneys?

Answer: Antidiuretic hormone (ADH)

Explanation: ADH regulates water reabsorption in kidney tubules, preventing dehydration.

Q.117) What type of joint is found in the elbow?

Answer: Hinge joint

Explanation: The elbow joint allows movement primarily in one plane, like a hinge.

Q.118) Which vitamin deficiency causes scurvy?

Answer: Vitamin C

Explanation: Vitamin C deficiency causes defective collagen formation, leading to scurvy symptoms.

Q.119) Which organelles are called the "powerhouse of the cell"?

Answer: Mitochondria

Explanation: Mitochondria generate ATP via aerobic respiration.

Q.120) What is the function of stomata in plants?

Answer: Gas exchange and transpiration

Explanation: Stomata allow carbon dioxide in for photosynthesis and release oxygen and water vapor.

Q.121) Which gland secretes adrenaline?

Answer: Adrenal gland

Explanation: The adrenal medulla produces adrenaline during stress for 'fight or flight' response.

Q.122) What is the blood group system discovered by Karl Landsteiner?

Answer: ABO blood group system

Explanation: The ABO system classifies blood types based on the presence of A and B antigens on red blood cells.

Q.123) Which part of the human brain controls voluntary movements?

Answer: Cerebrum

Explanation: The motor cortex in the cerebrum initiates voluntary muscle movements.

Q.124) What is the main function of the small intestine?

Answer: Absorption of nutrients

Explanation: The small intestine absorbs digested nutrients into the bloodstream.

Q.125) Which vitamin helps in the absorption of calcium?

Answer: Vitamin D

Explanation: Vitamin D promotes

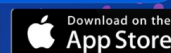


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intestinal absorption of calcium and phosphorus.

Q.126) What is the role of DNA polymerase?

Answer: DNA replication

Explanation: DNA polymerase synthesizes new DNA strands by adding nucleotides during replication.

Q.127) Which vitamin deficiency causes night blindness?

Answer: Vitamin A

Explanation: Vitamin A deficiency impairs formation of rhodopsin, affecting vision in low light.

Q.128) Which hormone regulates metabolism?

Answer: Thyroxine

Explanation: Thyroxine from the thyroid gland controls metabolic rate.

Q.129) Which blood vessels have the thinnest walls?

Answer: Capillaries

Explanation: Capillaries have thin walls for exchange of gases and nutrients between blood and tissues.

Q.130) What is the name of the protein that carries oxygen in the blood?

Answer: Hemoglobin

Explanation: Hemoglobin binds oxygen molecules for transport in red blood cells.

Q.131) Which vitamin is essential for clotting of blood?

Answer: Vitamin K

Explanation: Vitamin K is required for synthesizing clotting factors in the liver.

Q.132) Which part of the neuron conducts impulses away from the cell body?

Answer: Axon

Explanation: The axon transmits nerve impulses to other neurons or muscles.

Q.133) What is the function of lysosomes?

Answer: Digestion of cellular waste

Explanation: Lysosomes contain enzymes that break down unwanted materials inside the cell.

Q.134) Which hormone controls the fight or flight response?

Answer: Adrenaline

Explanation: Adrenaline increases heart rate, blood flow, and energy availability during stress.

Q.135) Which disease is caused by Plasmodium?

Answer: Malaria

Explanation: Malaria parasites infect red blood cells, causing fever and anemia.

Q.136) Which organ stores bile?

Answer: Gallbladder

Explanation: The gallbladder stores and concentrates bile before releasing it into the small intestine.

Q.137) What is the name of the pigment responsible for green color in plants?

Answer: Chlorophyll

Explanation: Chlorophyll absorbs light for photosynthesis and gives plants their green color.

Q.138) Which blood cells are responsible for immunity?

Answer: White blood cells

Explanation: White blood cells defend against infections.

Q.139) Which vitamin deficiency leads to rickets?

Answer: Vitamin D

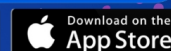


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Explanation: Lack of vitamin D causes soft and weak bones in children.

Q.140) Which part of the brain controls balance and coordination?

Answer: Cerebellum

Explanation: The cerebellum processes sensory input for smooth, coordinated movement.

Q.141) What is the process of cell division in somatic cells called?

Answer: Mitosis

Explanation: Mitosis results in two genetically identical daughter cells for growth and repair.

Q.142) Which hormone is secreted by the pancreas to lower blood sugar?

Answer: Insulin

Explanation: Insulin promotes uptake of glucose by cells, reducing blood sugar levels.

Q.143) What is the main structural component of the plant cell wall?

Answer: Cellulose

Explanation: Cellulose provides strength and rigidity to plant cells.

Q.144) Which vitamin is necessary for red blood cell formation?

Answer: Vitamin B12

Explanation: Vitamin B12 is essential for DNA synthesis in red blood cell production.

Q.145) Which gland regulates the secretion of other endocrine glands?

Answer: Pituitary gland

Explanation: The pituitary secretes hormones controlling thyroid, adrenal, and reproductive glands.

Q.146) Which blood type is considered the universal donor?

Answer: O negative

Explanation: O negative blood lacks A, B, and Rh antigens, preventing immune reactions in recipients.

Q.147) What is the primary role of the large intestine?

Answer: Absorption of water and electrolytes

Explanation: The large intestine absorbs water to form solid feces.

Q.148) Which enzyme breaks down proteins in the stomach?

Answer: Pepsin

Explanation: Pepsin digests proteins into peptides in acidic stomach conditions.

Q.149) What is the name of the genetic material found in the nucleus?

Answer: DNA

Explanation: DNA carries hereditary information for protein synthesis and cell function.

Q.150) Which part of the cell is involved in energy production?

Answer: Mitochondria

Explanation: Mitochondria generate ATP via aerobic respiration for cellular energy needs.

Q.151) Which vitamin deficiency causes beriberi?

Answer: Vitamin B1 (Thiamine)

Explanation: Thiamine deficiency leads to beriberi, causing nerve degeneration, muscle weakness, and cardiovascular problems.

Q.152) Which organelle is known as the “suicide bag” of the cell?

Answer: Lysosome

Explanation: Lysosomes contain digestive enzymes that break down worn-out cell parts or invading

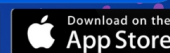


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pathogens, leading to cell death if released uncontrollably.

Q.153) Which part of the human brain controls speech?

Answer: Broca's area

Explanation: Broca's area, located in the frontal lobe, is responsible for speech production and language processing.

Q.154) What is the primary function of the xylem in plants?

Answer: Transport of water and minerals

Explanation: Xylem vessels transport water and dissolved minerals from roots to aerial parts of the plant.

Q.155) Which blood disorder is characterized by the inability to clot blood properly?

Answer: Hemophilia

Explanation: Hemophilia is a genetic disorder causing deficiency of clotting factors, leading to excessive bleeding.

Q.156) Which vitamin is synthesized by intestinal bacteria?

Answer: Vitamin K

Explanation: Gut bacteria produce vitamin K, essential for blood clotting.

Q.157) Which type of muscle is involuntary and striated?

Answer: Cardiac muscle

Explanation: Cardiac muscle is involuntary, striated muscle found only in the heart, responsible for pumping blood.

Q.158) What is the term for the loss of water from plant leaves?

Answer: Transpiration

Explanation: Transpiration is the evaporation of water from plant leaves through stomata.

Q.159) Which vitamin is essential for vision and skin health?

Answer: Vitamin A

Explanation: Vitamin A supports retina function and epithelial cell maintenance.

Q.160) Which part of the nervous system controls reflex actions?

Answer: Spinal cord

Explanation: The spinal cord mediates reflex actions independently of the brain.

Q.161) What is the main function of the pituitary gland?

Answer: Secretion of hormones regulating other glands

Explanation: The pituitary gland releases hormones controlling thyroid, adrenal, and reproductive glands.

Q.162) Which blood vessel carries deoxygenated blood to the lungs?

Answer: Pulmonary artery

Explanation: Pulmonary artery carries deoxygenated blood from the heart to the lungs for oxygenation.

Q.163) Which vitamin is important for calcium absorption and bone health?

Answer: Vitamin D

Explanation: Vitamin D enhances calcium and phosphorus absorption essential for bones.

Q.164) What is the term for a plant's response to gravity?

Answer: Gravitropism

Explanation: Gravitropism is growth directed by gravity; roots grow downward (positive), shoots upward (negative).

Q.165) Which hormone regulates the sleep-wake cycle?

Answer: Melatonin

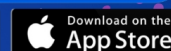


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Explanation: Melatonin from the pineal gland regulates circadian rhythms and sleep.

Q.166) Which blood cells are responsible for producing antibodies?

Answer: B lymphocytes

Explanation: B cells produce antibodies targeting specific pathogens.

Q.167) Which part of the plant anchors it to the soil?

Answer: Root

Explanation: Roots provide anchorage and absorb water and minerals.

Q.168) Which part of the human brain is responsible for memory?

Answer: Hippocampus

Explanation: The hippocampus is crucial for the formation and retrieval of memories.

Q.169) What is the basic structural unit of proteins?

Answer: Amino acids

Explanation: Proteins are polymers of amino acids linked by peptide bonds.

Q.170) Which hormone stimulates the fight or flight response?

Answer: Adrenaline

Explanation: Adrenaline prepares the body for immediate physical activity.

Q.171) Which vitamin is necessary for normal blood clotting?

Answer: Vitamin K

Explanation: Vitamin K is essential for synthesizing clotting factors.

Q.172) What is the main function of red blood cells?

Answer: Transport oxygen

Explanation: RBCs carry oxygen from lungs to tissues.

Q.173) Which organelles synthesize lipids and detoxify chemicals?

Answer: Smooth endoplasmic reticulum

Explanation: Smooth ER is involved in lipid synthesis and detoxification.

Q.174) What is the role of the hormone insulin?

Answer: Lower blood glucose levels

Explanation: Insulin promotes glucose uptake by cells.

Q.175) Which vitamin deficiency causes pernicious anemia?

Answer: Vitamin B12

Explanation: B12 deficiency impairs red blood cell formation.

Q.176) Which part of the brain controls heartbeat and breathing?

Answer: Medulla oblongata

Explanation: The medulla controls autonomic functions like respiration and heart rate.

Q.177) What type of joint is found in the hip?

Answer: Ball and socket joint

Explanation: Allows multi-directional movement.

Q.178) Which enzyme breaks down starch in the saliva?

Answer: Amylase

Explanation: Amylase converts starch into maltose.

Q.179) Which vitamin is produced when skin is exposed to sunlight?

Answer: Vitamin D

Explanation: UV rays convert precursors to active vitamin D.

Q.180) Which blood group is called the universal recipient?

Answer: AB positive

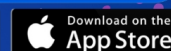


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Explanation: AB positive individuals can receive blood from all groups.

Q.181) What is the name of the pigment that traps light energy in plants?

Answer: Chlorophyll

Explanation: Chlorophyll absorbs light for photosynthesis.

Q.182) Which cell organelle is responsible for packaging and transporting proteins?

Answer: Golgi apparatus

Explanation: Golgi modifies and packages proteins for secretion.

Q.183) Which vitamin deficiency causes night blindness?

Answer: Vitamin A

Explanation: Lack of vitamin A affects rhodopsin formation.

Q.184) What is the function of white blood cells?

Answer: Immunity

Explanation: WBCs fight infections.

Q.185) Which hormone regulates water retention in kidneys?

Answer: Antidiuretic hormone (ADH)

Explanation: ADH controls water reabsorption.

Q.186) Which organ produces digestive enzymes like trypsin?

Answer: Pancreas

Explanation: Pancreas secretes enzymes for digestion.

Q.187) What is the main function of the large intestine?

Answer: Absorb water

Explanation: Large intestine absorbs water forming feces.

Q.188) Which part of the eye is responsible for focusing light?

Answer: Lens

Explanation: The lens adjusts shape to focus light on retina.

Q.189) What is the function of ribosomes?

Answer: Protein synthesis

Explanation: Ribosomes assemble amino acids into proteins.

Q.190) Which hormone stimulates milk production?

Answer: Prolactin

Explanation: Prolactin promotes lactation postpartum.

Q.191) Which vitamin deficiency causes rickets?

Answer: Vitamin D

Explanation: Vitamin D deficiency weakens bones.

Q.192) What is the role of the nephron?

Answer: Filter blood and form urine

Explanation: Nephrons remove waste and regulate fluid balance.

Q.193) Which blood vessels connect arteries and veins?

Answer: Capillaries

Explanation: Capillaries facilitate exchange of gases and nutrients.

Q.194) Which vitamin is essential for collagen synthesis?

Answer: Vitamin C

Explanation: Vitamin C is required for collagen formation.

Q.195) What is the name of the protein that stores oxygen in muscles?

Answer: Myoglobin

Explanation: Myoglobin stores and releases oxygen in muscles.



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Q.196) Which part of the brain is responsible for vision?

Answer: Occipital lobe

Explanation: Processes visual information.

Q.197) Which gland secretes growth hormone?

Answer: Pituitary gland

Explanation: Stimulates growth and cell reproduction.

Q.198) Which hormone lowers blood sugar levels?

Answer: Insulin

Explanation: Insulin promotes glucose uptake.

Q.199) Which disease is caused by deficiency of iodine?

Answer: Goitre

Explanation: Iodine deficiency enlarges the thyroid gland.

Q.200) Which vitamin helps in blood clotting?

Answer: Vitamin K

Explanation: Required for synthesizing clotting proteins.

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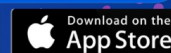


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