

PAST PAPERS PDF

General Science, Ability & Everyday Science Notes

Important Question & Answer Notes for Competitive Exams

Complete Exam Preparation Notes

تعارف

یہ نوٹس جنرل سائنس، ایبلٹی (Ability) اور ایوری ڈے سائنس (Everyday Science) کے بار بار امتحانات میں آنے والے نہایت اہم سوالات پر مشتمل ہیں۔ اگر آپ ان سوالات و جوابات کی اچھی تیاری کر لیتے ہیں تو CSS, PMS, PPSC, FPSC, FIA, ASF, ANF, MOD, NTS, CTS, OTS، پنجاب پولیس، لیکچرر، ایس ایس ٹی، ایجوکیٹرز اور دیگر تمام مقابلے کے امتحانات کے جنرل سائنس والے حصے کی مضبوط تیاری ہو جائے گی۔

اس نوٹس میں صرف Question & Answer فارمیٹ رکھا گیا ہے تاکہ کم وقت میں زیادہ سے زیادہ سلیبس آسانی سے یاد کیا جا سکے۔ تمام سوالات امتحانی نقطہ نظر سے منتخب کیے گئے ہیں اور بار بار پوچھے جانے والے اہم ترین سوالات شامل کیے گئے ہیں۔

Format: Question & Answer style notes with a light Past Papers PDF watermark on every page.

Questions 1-100

Q.1 What is the mass of a body at the center of the Earth?

Answer: Constant (Same as on the surface)

Q.2 Which Muslim scientist is credited with discovering the contagious nature of diseases and pulmonary circulation of blood?

Answer: Ibn al-Nafis

Q.3 How many spinal nerves are there in the human body?

Answer: 31 pairs

Q.4 What is the study of agriculture called?

Answer: Agronomy

Q.5 Which solvent is commonly used in soft drinks?

Answer: Water

Q.6 Which of the following terms is NOT used in Physics?

Answer: Stock value

Q.7 What is the minimum distance between two points called in physics?

Answer: Displacement

Q.8 Which of the following can be caused by global warming and climate change?

Answer: All of these (Rising sea levels, Extreme weather events, Melting polar ice caps)

Q.9 Which of the following drugs is classified as an analgesic, used to relieve pain?

Answer: Analgesic

Q.10 Which exercise is commonly done to stretch the ankles and calves?

Answer: Achilles Stretch

Q.11 Plastids are present in which type of cells?

Answer: Plant cells

Q.12 What is the main purpose of the REDD+ initiative?

Answer: Reduce emissions from deforestation and forest degradation

Q.13 Which layer of the atmosphere protects the Earth from harmful ultraviolet (UV) rays?

Answer: Ozone Layer

Q.14 What is the primary cause of deforestation?

Answer: Urbanization and agriculture

Q.15 What is the normal temperature of a healthy human body on the Fahrenheit scale?

Answer: 98.6°F

Q.16 Who discovered that malaria is transmitted by mosquitoes?

Answer: Sir Ronald Ross

Q.17 Which organelle is responsible for protein synthesis in a cell?

Answer: Ribosome

Q.18 What is the approximate blood circulation rate in human capillaries in mm/sec?

Answer: 1 mm/sec

Q.19 Malaria is spread through:

Answer: Plasmodium (Anopheles)

Q.20 ____ is a key gland that plays a crucial role in digestion by producing enzymes and bicarbonate.

Answer: Pancreas

Q.21 Radioactivity is measured by:

Answer: Geiger-Muller Counter

Q.22 Which instrument is used to measure the wavelength of radiation absorbed by a leaf?

Answer: Spectrophotometer

Q.23 Which of the following is the most abundant element in the Universe?

Answer: Hydrogen

Q.24 Mole is the unit of:

Answer: Amount of substance

Q.25 Which disease is expected to increase significantly by 2040?

Answer: Cancer

Q.26 Which type of flu primarily affects birds?

Answer: H5N1 (Bird Flu)

Q.27 Which country has the highest carbon emissions?

Answer: China

Q.28 Which country President has signed a bill that has granted lifetime immunity to former presidents?

Answer: Russia

Q.29 In which city is Greenwich located?

Answer: London

Q.30 Who is credited with inventing the first mechanical computer?

Answer: Charles Babbage

Q.31 Steel is a mixture of:

Answer: Iron and Carbon

Q.32 Which particles cannot move from their place?

Answer: Solid particles

Q.33 Animals and plants buried under soil for millions of years are called:

Answer: Fossils

Q.34 Foraminifera produces:

Answer: Chalk

Q.35 An undesirable change in the environment is called:

Answer: Pollution

Q.36 The molten or semi-molten rock material found beneath the surface of the Earth is called:

Answer: Magma

Q.37 Increase of UV rays causes:

Answer: Skin cancer

Q.38 What is the SI unit of speed?

Answer: None of these (Correct: meter per second - m/s)

Q.39 Due to deforestation, which of the following can increase?

Answer: Soil erosion

Q.40 A picosecond is equal to:

Answer: 10^{-12} seconds

Q.41 The cell membrane is also known as the plasma membrane. It is the outermost covering of:

Answer: Animal cells

Q.42 The speed of electromagnetic waves in a vacuum is:

Answer: Same for all intensities

Q.43 When a key is pressed on the keyboard, which standard is used for converting the keystrokes into corresponding bits?

Answer: ASCII

Q.44 What does COUNTA() function do?

Answer: Counts non-empty cells

Q.45 Bu Ali Sina is famous for his work in:

Answer: Medicine

Q.46 The study of Earth's atmosphere concerning weather, particularly forecasting, is called:

Answer: Meteorology

Q.47 A submarine works according to which scientific law?

Answer: Archimedes' Principle

Q.48 The model where the Sun was believed to revolve around the Earth (Geocentric) was first proposed by which scientist?

Answer: Ptolemy

Q.49 Computer chips are primarily made from which material?

Answer: Silicon

Q.50 Which gas is most abundant in the Earth's atmosphere?

Answer: Nitrogen (78%)

Q.51 What is the primary function of the camera in a smartphone?

Answer: To capture photos and videos

Q.52 A byte consists of how many bits?

Answer: 8

Q.53 The brain of the computer is called:

Answer: Central Processing Unit (CPU)

Q.54 What does SQL stand for?

Answer: Structured Query Language

Q.55 Removing the unwanted part of an image is called?

Answer: Cropping

Q.56 Which cable is commonly used to connect a monitor to a computer?

Answer: HDMI

Q.57 Ice floats on water because:

Answer: Water is denser than ice

Q.58 The minimum speed of sound in air at 0°C is approximately:

Answer: 331 m/s

Q.59 In which medium does sound travel the fastest?

Answer: Steel

Q.60 Which is the nearest galaxy to Earth?

Answer: Andromeda Galaxy

Q.61 Which planet is called the Morning and Evening Star?

Answer: Venus

Q.62 A body that survives atmospheric passage and reaches earth is called?

Answer: Meteorite

Q.63 What is a Supernova?

Answer: Massive stellar explosion

Q.64 Soil erosion is caused by:

Answer: Deforestation

Q.65 Water sagacity refers to the wise and efficient use of water. In which area is water sagacity important?

Answer: All of these

Q.66 Which of the following rivers is significantly affected by pollution and poses serious environmental challenges?

Answer: Ganges River

Q.67 Acid rain causes damage to:

Answer: All of these

Q.68 What is the main cause of biodiversity loss?

Answer: Habitat destruction

Q.69 What is the main cause of ozone layer depletion?

Answer: CFCs

Q.70 The chemical formula CH_3COOH is called:

Answer: Acetic Acid

Q.71 Which of the following is an example of a mineral acid?

Answer: Sulfuric Acid

Q.72 Which type of energy is produced during a fission reaction in a nuclear reactor?

Answer: Thermal Energy

Q.73 What is the shape of the Sulphur Dioxide (SO_2) molecule?

Answer: Non-linear (Bent shape)

Q.74 Taste buds are for:

Answer: Selection

Q.75 In the human body percentage of which element is highest?

Answer: Oxygen

Q.76 The process in which plants convert CO_2 + sunlight into glucose is called?

Answer: Photosynthesis

Q.77 Which photoreceptors detect color?

Answer: Cones

Q.78 What is the normal calcium level in human blood?

Answer: 8.5–10.5 mg/dl

Q.79 Who was the inventor of the telephone?

Answer: Alexander Graham Bell

Q.80 Which machine was invented by Eli Whitney in 1794?

Answer: Cotton Gin

Q.81 Al-Nasr (Hatf IX) is what type of weapon?

Answer: Surface-to-surface ballistic missile

Q.82 Corrosion of a river bed creates?

Answer: Rapids

Q.83 Which instrument measures earthquake intensity?

Answer: Seismograph

Q.84 Which instrument measures the purity of milk?

Answer: Lactometer

Q.85 What is the main cause of ozone layer depletion?

Answer: CFCs

Q.86 Which of the following gases are known as greenhouse gases?

Answer: CO_2

Q.87 A member of a species that is reduced in number is called:

Answer: Endangered Species

Q.88 A body that survives atmospheric passage and reaches earth is called?

Answer: Meteorite

Q.89 What is a Supernova?

Answer: Massive stellar explosion

Q.90 The process in which plants convert CO_2 + sunlight into glucose is called?

Answer: Photosynthesis

Q.91 Which photoreceptors detect color?

Answer: Cones

Q.92 What is the normal calcium level in human blood?

Answer: 8.5–10.5 mg/dl

Q.93 Immunological memory provides the foundation for?

Answer: Vaccine

Q.94 During hibernation, the frog respires from:

Answer: Skin only

Q.95 Intestines are long, coiled, and have many folds in:

Answer: Herbivores

Q.96 Which is the largest gland in the human body?

Answer: Liver

Q.97 What is the shape of the Sulphur Dioxide (SO₂) molecule?

Answer: Non-linear (Bent shape)

Q.98 Pasteurization is the process of heating:

Answer: Milk

Q.99 Which element is present in abundance in seawater?

Answer: Oxygen

Q.100 The horizontal rows in the periodic table are called:

Answer: Periods

Questions 101-200

Q.101 John Dalton gave the theory of:

Answer: Atomic Theory

Q.102 Which gas is commonly used in tungsten filament bulbs to prevent the filament from oxidizing?

Answer: Argon

Q.103 Which of the following substances is most soluble in water?

Answer: Sugar

Q.104 Vaporization is the process in which:

Answer: A liquid turns into a vapor

Q.105 How many electrons are present in a stable outer shell (also known as the valence shell) of an atom?

Answer: 8

Q.106 Galvanometer works on the rules of?

Answer: Electromagnetism

Q.107 What is the unit of specific gravity?

Answer: No unit

Q.108 Which material is commonly used for transformer windings?

Answer: Copper

Q.109 Which of the following instruments is not used to measure pressure?

Answer: Galvanometer

Q.110 CRISPR-Cas9 is used for?

Answer: Changing DNA sequences

Q.111 Glacier grooves move in which direction?

Answer: Parallel to glacier movement

Q.112 Paleontology is the study of:

Answer: Ancient life and fossils

Q.113 The 9th edition of the Asian Games was held in:

Answer: New Delhi (1982)

Q.114 What is detergent?

Answer: A cleaning agent

Q.115 A catalyst is used for:

Answer: Increasing the rate of a chemical reaction

Q.116 Silicon is used to make:

Answer: Semiconductors

Q.117 Which of the following is used to copy objects in AutoCAD?

Answer: Co

Q.118 A rectangle is shaped like a:

Answer: Polygon

Q.119 The muscles in the posterior compartment of the thigh are collectively known as the:

Answer: Hamstrings

Q.120 Planning is a-----process.

Answer: All of these

Q.121 Strategic planning is:

Answer: Long term planning.

Q.122 The assumptions about future derived from forecasting and used in planning are known as:

Answer: Planning premises

Q.123 Hazara University is located in which city?

Answer: Mansehra

Q.124 Tarbela Dam was constructed in which year?

Answer: 1976

Q.125 In which year was the zipper invented?

Answer: 1913

Q.126 Indra Nooyi, a renowned business woman and former CEO of PepsiCo, is originally from which country?

Answer: India

Q.127 The 1992 Cricket World Cup was won by which country?

Answer: Pakistan

Q.128 What is the name given to the series of massive protests that occurred in several Arab countries, starting in 2010?

Answer: Arab Uprising

Q.129 Makran and Kharan regions were formally merged into Balochistan province in:

Answer: 1952

Q.130 The Dyarchy system introduced in British India was based on:

Answer: Provincial autonomy

Q.131 In which month and year was Benazir Bhutto elected as Prime Minister of Pakistan for the second time?

Answer: October 1993 - 5 Nov. 1996

Q.132 Who was the first President of Pakistan?

Answer: Iskander Mirza

Q.133 Who was the first Foreign Minister of Pakistan?

Answer: Zafarullah Khan

Q.134 Sirkap Palace is located near which ancient city?

Answer: Taxila

Q.135 Who was the first Civil Martial Law Administrator of Pakistan?

Answer: Zulfikar Ali Bhutto

Q.136 Firdausi, the author of Shah Namah, was poet laureate in the court of:

Answer: Mahmud Ghaznavi

Q.137 After the partition of India in 1947, when was the first election of the Punjab Assembly held in Pakistan?

Answer: 1951

Q.138 Which field of archaeology would most likely be interested in ancient pre-literate societies around the world?

Answer: Prehistoric archaeology

Q.139 What is the share of each province in the Senate of Pakistan?

Answer: 23 seats each

Q.140 Ramadan is the----- month of the Islamic (Hijri) calendar.

Answer: 9

Q.141 Khayal music system was introduced by:

Answer: Amir Khusrau

Q.142 Islamabad was declared the capital of Pakistan during the era of which leader?

Answer: Ayub Khan

Q.143 The 'Five Eyes' alliance is primarily concerned with which of the following?

Answer: Intelligence sharing

Q.144 The Arctic is located at which pole?

Answer: North Pole

Q.145 Which of the following is not a characteristic of a computer?

Answer: Intelligence

Q.146 The first generation of computers used:

Answer: Vacuum Tubes

Q.147 Which one of the following has the shortest access time (fastest memory)?

Answer: Register

Q.148 Free oxygen is available on which planet?

Answer: Earth

Q.149 The Sun has burned about half of its hydrogen fuel in approximately how many years?

Answer: 4.6 billion years

Q.150 When a star starts fusing helium into carbon, it becomes a:

Answer: Red giant

Q.151 Insulin is secreted by:

Answer: Pancreas

Q.152 Which instrument is used to measure blood pressure?

Answer: Sphygmomanometer

Q.153 Selenium, a trace element, works closely with Vitamin ____ in the body.

Answer: E

Q.154 What does the medical term Lordosis mean?

Answer: Hollow back

Q.155 Deficiency of Vitamin D leads to ____ in children.

Answer: Rickets

Q.156 Goitre is caused by the deficiency of which nutrient?

Answer: Iodine

Q.157 What is the main and larger locomotory structure of bacteria?

Answer: Flagellum

Q.158 Which air gas is the main cause of increased temperature (global warming)?

Answer: Carbon Dioxide

Q.159 Which substance is used as a foaming agent in a fire extinguisher?

Answer: Aluminium hydroxide

Q.160 Which of the following elements is liquid at room temperature?

Answer: Bromine

Q.161 A refrigerator works on the principle of:

Answer: Thermodynamics

Q.162 One nanometer is equal to:

Answer: 10^{-9} meters

Q.163 The resistance in an object that causes it to resist changes in its motion is called:

Answer: Inertia

Q.164 Who formulated the law of gravity?

Answer: Isaac Newton

Q.165 Which of the following is the fastest growing tree?

Answer: Eucalyptus

Q.166 Kinetic and Potential Energy are which type of energy?

Answer: Mechanical Energy

Q.167 W. K. Rontgen discovered:

Answer: X-Rays

Q.168 A Thermo flask is used to maintain:

Answer: Temperature of liquids

Q.169 Oxygen was discovered by:

Answer: Joseph Priestley

Q.170 Influenza is caused by:

Answer: Virus

Q.171 The Sun is classified as:

Answer: Yellow star

Q.172 What is the approximate surface temperature of the Sun?

Answer: 6,000 K

Q.173 What is the average distance between Earth and Moon?

Answer: 380,000 km

Q.174 The Earth's atmosphere extends to roughly what height?

Answer: 10,000 km

Q.175 Marsupials are mammals that carry their young in a:

Answer: Pouch

Q.176 Mushrooms belong to which kingdom?

Answer: Fungi

Q.177 Cooking gas is a mixture of:

Answer: Propane and Butane

Q.178 Largest part of the human brain:

Answer: Cerebrum

Q.179 Acid produced in human stomach:

Answer: Hydrochloric acid

Q.180 Non-metal with good conductivity:

Answer: Graphite

Q.181 Buffer for environment:

Answer: Wetlands

Q.182 Membrane surrounding lungs:

Answer: Pleura

Q.183 Polio virus is:

Answer: RNA virus

Q.184 Railway track gaps are used for:

Answer: Thermal expansion

Q.185 Who discovered that the Sun is the center of the Solar System?

Answer: Nicolaus Copernicus

Q.186 Source of Vitamin D:

Answer: Butter

Q.187 Who discovered bacteria?

Answer: Leeuwenhoek

Q.188 Resting stroke volume of heart:

Answer: 60–80 ml

Q.189 Goitre is caused by deficiency of:

Answer: Iodine

Q.190 Main locomotory structure of bacteria:

Answer: Flagellum

Q.191 Law of gravity formulated by:

Answer: Isaac Newton

Q.192 Who proposed the Big Bang Theory?

Answer: George Lemaître

Q.193 Gigantic clouds of dust and gas in space are called:

Answer: Nebula

Q.194 Why can light not escape from a black hole?

Answer: Due to its extremely strong (infinite) gravity.

Q.195 Celestial bodies that do not have their own heat and light are called:

Answer: Planets

Q.196 Bodies that usually fall from space to the Earth are called:

Answer: Meteorites

Q.197 Who is known as the Father of Modern Cosmology?

Answer: Edwin Powell Hubble

Q.198 Dr. Abdus Salam was awarded the Nobel Prize for his work on which fundamental forces?

Answer: Weak and Electromagnetic Forces

Q.199 What is the smallest known constituent of matter?

Answer: Quark

Q.200 Who proposed the Laws of Planetary Motion?

Answer: Johannes Kepler

Questions 201-300

Q.201 Who defined the Law of Gravitation?

Answer: Sir Isaac Newton

Q.202 Who discovered the force of attraction and repulsion between electric charges?

Answer: Charles-Augustin de Coulomb

Q.203 Electron was discovered by:

Answer: J. J. Thomson

Q.204 Which scientist first performed experiments on gravity?

Answer: Galileo Galilei

Q.205 Galileo's famous experiment disproved whose theory of downward motion?

Answer: Aristotle

Q.206 Albert Einstein was a:

Answer: Physicist

Q.207 Who was selected as the "Man of the 20th Century"?

Answer: Albert Einstein

Q.208 Who gave the Theory of Relativity?

Answer: Albert Einstein

Q.209 Who founded the relationship between Electricity and Magnetism?

Answer: Michael Faraday

Q.210 Who proposed the Law of Electromagnetic Induction?

Answer: Michael Faraday

Q.211 Max Planck won the Nobel Prize in Physics in 1918 for the discovery of:

Answer: Energy Quantum

Q.212 Who was the first Western scientist to suggest that the Earth revolves around the Sun?

Answer: Nicolaus Copernicus

Q.213 Electromagnetic waves were discovered by:

Answer: Heinrich Rudolf Hertz

Q.214 Heinrich Rudolf Hertz belonged to which country?

Answer: Germany

Q.215 Who transmitted the first radio signal through the air?

Answer: Guglielmo Marconi

Q.216 What is a Supernova?

Answer: Exploding Star

Q.217 How many planets are there in our Solar System?

Answer: 8

Q.218 Which of the following is the largest?

Answer: Galaxy

Q.219 The Sun is a:

Answer: Star

Q.220 Which process powers the Sun?

Answer: Nuclear Fusion

Q.221 Which is the nearest star to the Earth?

Answer: Sun

Q.222 The Sun contains what percentage of the total mass of the Solar System?

Answer: 99.86%

Q.223 Sunlight can reach a depth of about how many meters in the ocean?

Answer: 200 meters

Q.224 How much time does sunlight take to reach the Earth from the Sun?

Answer: 8 minutes and 20 seconds

Q.225 Sunlight takes about how much time to reach the Earth?

Answer: About 8 minutes

Q.226 Who discovered the Sunspots?

Answer: Galileo Galilei

Q.227 Which is the smallest planet of the Solar System?

Answer: Mercury

Q.228 Which planet is nearest to the Sun?

Answer: Mercury

Q.229 Which planet is the densest in our Solar System?

Answer: Earth

Q.230 In which month is the distance between the Earth and the Sun the smallest?

Answer: January

Q.231 Which planet is nearest to the Earth?

Answer: Venus

Q.232 All weather conditions on Earth are mainly caused by:

Answer: Heating from the Sun

Q.233 The Earth is the ____ largest planet in the Solar System.

Answer: Fifth (5th)

Q.234 Mars is known as:

Answer: Red Planet

Q.235 How many natural satellites does Mars have?

Answer: 2

Q.236 Which is the largest planet in the Solar System?

Answer: Jupiter

Q.237 Which planet has the maximum number of natural satellites?

Answer: Saturn

Q.238 Which planet is known as the "Ringed Planet"?

Answer: Saturn

Q.239 Which is the second largest planet in the Solar System?

Answer: Saturn

Q.240 Which planet is the farthest from the Sun?

Answer: Neptune

Q.241 What is the last planet in the Solar System?

Answer: Neptune

Q.242 Which is the slowest planet around the Sun?

Answer: Neptune

Q.243 Which planet revolves most slowly around the Sun?

Answer: Neptune

Q.244 Rotation of a body around its own axis is called:

Answer: Rotation

Q.245 Which planet takes the longest time to orbit around the Sun?

Answer: Neptune

Q.246 Which of the following is not considered a planet?

Answer: Pluto

Q.247 Snow-capped mountains are found on which celestial body?

Answer: Pluto

Q.248 Distance between stars is measured in:

Answer: Light Year

Q.249 Light Year is the unit of:

Answer: Distance

Q.250 Lunar Sea refers to:

Answer: A dark plain on the Moon

Q.251 The gravity of the Moon compared to the Earth is:

Answer: 1/6

Q.252 Why do the phases of the Moon occur?

Answer: We see only the illuminated part of the Moon that reflects sunlight toward us.

Q.253 Solar eclipse occurs when:

Answer: The Moon comes between the Sun and the Earth.

Q.254 A luminous body emits:

Answer: Light

Q.255 Light travels at approximately ____ miles per second.

Answer: 186,000 miles per second

Q.256 The speed of light is:

Answer: 300,000 km/s

Q.257 Objects like glass through which things can be seen clearly are called:

Answer: Transparent

Q.258 When light enters from a rarer to a denser medium and bends towards the normal, it is called:

Answer: Refraction of Light

Q.259 Which of the following uses a source of light?

Answer: Periscope

Q.260 Which are the primary colors of light?

Answer: Red, Green and Blue

Q.261 Which of the following is not a primary color of light?

Answer: Yellow

Q.262 After passing through a prism, white light disperses into:

Answer: Seven colors

Q.263 By mixing all the colors of the visible spectrum, we produce:

Answer: White Light

Q.264 Why is the clear sky blue?

Answer: Blue light is scattered more than red light.

Q.265 The phenomenon in which light is separated into different colors is called:

Answer: Dispersion of Light

Q.266 A rainbow is formed due to sunlight being reflected and refracted by:

Answer: Water Drops

Q.267 Optical Fiber works on the principle of:

Answer: Total Internal Reflection

Q.268 Fiber Optics are mainly used in:

Answer: Telecommunication

Q.269 Optical fibers are made of:

Answer: Glass or Plastic

Q.270 The inner core of an optical fiber is made of:

Answer: Glass or Plastic

Q.271 Which material is used in optical fiber?

Answer: Glass Thread

Q.272 Optical Fiber System is mainly utilized in:

Answer: Telecommunication System

Q.273 Which mirror can be used to focus sunlight at one point?

Answer: Concave Mirror

Q.274 Light of the Sun can be focused by which lens?

Answer: Convex Lens

Q.275 A person suffering from near-sightedness (Myopia) uses:

Answer: Concave Lens

Q.276 Far-sightedness can be corrected by:

Answer: Convex Lens

Q.277 Which mirror is used in the headlights of cars?

Answer: Concave Mirror

Q.278 The rear-view mirror of a motor vehicle is:

Answer: Convex Mirror

Q.279 Which type of lens is found in the human eye?

Answer: Convex Lens

Q.280 A camera uses a convex lens to form an image which is:

Answer: Real, Inverted and Diminished

Q.281 According to Boyle's Law, if the pressure of a gas is doubled, its volume becomes:

Answer: Half

Q.282 Wind always blows from an area of:

Answer: High Pressure to Low Pressure

Q.283 Who proposed the Theory of Evolution?

Answer: Charles Darwin

Q.284 Who gave the Cell Theory?

Answer: Matthias Schleiden and Theodor Schwann

Q.285 Who proposed the Law of Independent Assortment?

Answer: Gregor Mendel

Q.286 A mechanical stopwatch can measure a minimum time interval of:

Answer: 0.1 second (1/10 second)

Q.287 A submarine works on which principle?

Answer: Archimedes' Principle

Q.288 The Pythagorean Theorem relates to which shape?

Answer: Right-angled Triangle

Q.289 Which of the following radiations has the most energetic photons?

Answer: Gamma Rays

Q.290 Which material provides protection against Gamma Rays?

Answer: Lead or Concrete

Q.291 Which of the following rays are the most penetrating?

Answer: Gamma Rays

Q.292 Radiation was discovered by:

Answer: Henri Becquerel

Q.293 Who invented the system of reading and writing for the blind?

Answer: Louis Braille

Q.294 Who invented bifocal spectacles and the lightning rod?

Answer: Benjamin Franklin

Q.295 Benjamin Franklin is known as the Father of:

Answer: Electricity

Q.296 Who invented the Superconductor?

Answer: Heike Kamerlingh Onnes

Q.297 Who invented Dynamite?

Answer: Alfred Nobel

Q.298 Iodine was discovered by:

Answer: Bernard Courtois

Q.299 Who discovered the first vaccine?

Answer: Edward Jenner

Q.300 In which year did Edward Jenner develop the world's first vaccine?

Answer: 1796

Questions 301-400

Q. 301: Which is the most abundant mineral in the human body?

Answer: Calcium

Q. 302: Gold, Silver and Copper are:

Answer: Metallic Minerals

Q. 303: Marble is which type of rock?

Answer: Metamorphic Rock

Q. 304: Which of the following is a man-made substance?

Answer: (Question Incomplete)

Q. 305: The Periodic Table was formulated by:

Answer: Dmitri Mendeleev and Henry Moseley

Q. 306: Which is the first element in the Periodic Table?

Answer: Hydrogen

Q. 307: Solder is an alloy of:

Answer: Tin and Lead

Q. 308: Stainless Steel is an alloy of:

Answer: Iron, Chromium and Nickel

Q. 309: Stainless Steel is a form of:

Answer: Alloy

Q. 310: Bronze is an alloy of:

Answer: Copper and Tin

Q. 311: What is the chemical formula of sugar?

Answer: $C_{12}H_{22}O_{11}$

Q. 312: Ethanol extracted from sugarcane is used as:

Answer: Biofuel (Bioethanol)

Q. 313: Saturated hydrocarbons are called:

Answer: Alkanes

Q. 314: Which material is used in a normal pencil?

Answer: Graphite

Q. 315: Enzymes are basically made of:

Answer: Proteins

Q. 316: What should be given to an athlete for instant energy?

Answer: Glucose

Q. 317: Milk contains approximately how much water?

Answer: 87%

Q. 318: Biofuels are derived from:

Answer: Biomass

Q. 319: Fats and oils provide approximately ____ times more energy than carbohydrates and proteins.

Answer: 2.25 Times

Q. 320: The enzyme that digests fats is:

Answer: Lipase

Q. 321: Interferon is:

Answer: A Protein

Q. 322: Fat is mainly stored in:

Answer: Adipose Tissue

Q. 323: Which has the maximum calorific value?

Answer: Hydrogen

Q. 324: Muscles and blood are mainly formed of:

Answer: Proteins

Q. 325: All enzymes are made of:

Answer: Proteins

Q. 326: The sugar present in milk is:

Answer: Lactose

Q. 327: Homo Erectus was found in:

Answer: Africa and Asia

Q. 328: Who presented the Theory of Evolution?

Answer: Charles Darwin

Q. 329: Who presented the theory of "Survival of the Fittest"?

Answer: Herbert Spencer

Q. 330: The diversity of species on Earth supports the idea of:

Answer: Evolution

Q. 331: Which element is present in the largest amount in the human body?

Answer: Oxygen

Q. 332: The basic unit of plants and animals is:

Answer: Cell

Q. 333: Which organism contains two nuclei?

Answer: Paramecium

Q. 334: Smooth Endoplasmic Reticulum is involved in the synthesis and storage of:

Answer: Lipids

Q. 335: Membrane-bound packets of digestive enzymes are called:

Answer: Lysosomes

Q. 336: Which organelle is known as the protein factory of the cell?

Answer: Ribosomes

Q. 337: The powerhouse of the cell is:

Answer: Mitochondria

Q. 338: The size of plants and animals increases by:

Answer: Cell Division (Mitosis)

Q. 339: Organisms encode their genes in:

Answer: DNA (Deoxyribonucleic Acid)

Q. 340: Approximately what fraction of the human genome encodes proteins?

Answer: About 1.5%

Q. 341: DNA Polymerase was first discovered in which organism?

Answer: Escherichia coli (E. coli)

Q. 342: What is the function of spindle fibers?

Answer: To separate chromosomes during cell division.

Q. 343: How many chromosomes does a normal human have?

Answer: 46 (23 Pairs)

Q. 344: Non-flowering plants are called:

Answer: Cryptogams

Q. 345: Pollen grains are produced by:

Answer: Anther

Q. 346: Non-flowering plants are called:

Answer: Cryptogams

Q. 347: Plant growth over another plant is called:

Answer: Epiphyte (Epiphytism)

Q. 348: Which plants are called Arthropytes?

Answer: Rushes, Sedges, Horsetails

Q. 349: Which plant does not produce food itself?

Answer: Fungi or Parasitic Plants (e.g., Dodder)

Q. 350: Xerophytes are:

Answer: Plants of dry habitats with thick cuticle

Q. 351: Insectivorous plants include:

Answer: Venus Flytrap, Pitcher Plant, Sundew

Q. 352: Amborella is:

Answer: The most primitive known flowering plant

Q. 353: Dead plants in water bodies causing oxygen depletion is called:

Answer: Eutrophication

Q. 354: Male part of a flower is called:

Answer: Stamen

Q. 355: Scientific cultivation of fruits and vegetables is called:

Answer: Horticulture

Q. 356: Osmosis is:

Answer: Movement of water through a semipermeable membrane

Q. 357: Removal of water vapor from leaves is called:

Answer: Transpiration

Q. 358: If all plants die, animals will die due to shortage of:

Answer: Oxygen

Q. 359: Secondary growth of stems and roots means:

Answer: Increase in girth or thickness

Q. 360: Which element is NOT essential for plants?

Answer: Sodium, Silicon, Selenium (Depends on options)

Q. 361: Plants during the night exhale:

Answer: Carbon Dioxide (CO₂)

Q. 362: Opium poppy is called:

Answer: Papaver somniferum

Q. 363: A plant under red light appears:

Answer: Black

Q. 364: A well-ventilated place is:

Answer: A place with fresh air and proper light

Q. 365: Who discovered that plants have life?

Answer: Sir Jagadish Chandra Bose

Q. 366: Dried flower buds used as spice are:

Answer: Cloves

Q. 367: Female part of a plant is called:

Answer: Pistil (Carpel)

Q. 368: Plant cell wall is made of:

Answer: Cellulose

Q. 369: Stomata close when guard cells:

Answer: Lose turgor (become flaccid)

Q. 370: Gibberellins are:

Answer: Plant hormones that promote growth

Q. 371: Primary producers are:

Answer: Plants (Autotrophs)

Q. 372: Permanent wilting point is:

Answer: Minimum soil moisture required for plants

Q. 373: A mature tree absorbs carbon dioxide annually:

Answer: 20–40 kg

Q. 374: Process by which plants make food is:

Answer: Photosynthesis

Q. 375: Photosynthesis occurs in:

Answer: Chloroplasts

Q. 376: Plants absorb which gas?

Answer: Carbon Dioxide (CO₂)

Q. 377: Photosynthesis is faster in:

Answer: Red and Blue light

Q. 378: Carbon dioxide is removed by:

Answer: Photosynthesis

Q. 379: Reverse process of photosynthesis is:

Answer: Cellular Respiration

Q. 380: Carbohydrates are stored as:

Answer: Starch (Plants) and Glycogen (Animals)

Q. 381: Dark reactions occur in:

Answer: Stroma of chloroplast

Q. 382: Main photosynthetic pigment is:

Answer: Chlorophyll

Q. 383: Pollen grains are produced by:

Answer: Anther

Q. 384: Parthenocarpy is:

Answer: Seedless fruit production

Q. 385: Fruit develops after fertilization from:

Answer: Ovary

Q. 386: Queen of flowers is:

Answer: Rose

Q. 387: Tomato belongs to:

Answer: Fruit

Q. 388: Which mushroom is poisonous?

Answer: Amanita phalloides (Death Cap)

Q. 389: Largest ecosystem is:

Answer: Ocean (Marine ecosystem)

Q. 390: Biome is a community of:

Answer: Plants and animals

Q. 391: Aqua means:

Answer: Water

Q. 392: Sea water contains:

Answer: Sodium Chloride (NaCl)

Q. 393: Purest water is obtained by:

Answer: Distillation

Q. 394: Ice melting on roads is done using:

Answer: Salt (NaCl)

Q. 395: Melting point of ice is:

Answer: 0°C (32°F)

Q. 396: Ice floats because:

Answer: It is less dense than water

Q. 397: Density of water is:

Answer: 1 g/cm³

Q. 398: Maximum density of water is at:

Answer: 4°C

Q. 399: Boiling point of water is:

Answer: 100°C

Q. 400: Potential of pure water is:

Answer: Zero

Questions 401-500

Q. 401: Salinity is measured in:

Answer: Parts per thousand (ppt)

Q. 402: Most soluble substance in water is:

Answer: Sugar or Salt (depends on options)

Q. 403: Water is called universal solvent because:

Answer: Because it can dissolve most substances

Q. 404: Amount of water vapour in air is called:

Answer: Humidity

Q. 405: Water vapour is:

Answer: An invisible gas

Q. 406: Most serious environmental effect of hazardous wastes is:

Answer: Contamination of groundwater

Q. 407: Which is NOT a natural fiber?

Answer: Nylon, Polyester, Rayon

Q. 408: Which is non-biodegradable?

Answer: Plastic, Glass, Metal

Q. 409: PVC stands for:

Answer: Polyvinyl Chloride

Q. 410: Which can be recycled many times?

Answer: Glass and Aluminum

Q. 411: Tea leaves contain primary compound:

Answer: Caffeine

Q. 412: Modern classification divides organisms into:

Answer: Six Kingdoms (or Three Domains)

Q. 413: Caterpillar transforming into butterfly is called:

Answer: Metamorphosis

Q. 414: Disease-transmitting insects are called:

Answer: Vectors

Q. 415: Bees need how many flowers for 1 pound honey?

Answer: 2 million flowers

Q. 416: Bacteria is:

Answer: Single-celled microorganism (Prokaryote)

Q. 417: Gerbil is a type of:

Answer: Rodent

Q. 418: Bats locate objects at night by:

Answer: Echolocation

Q. 419: Which is NOT a ruminant?

Answer: Pig, Horse, Rabbit

Q. 420: Which is a carnivore?

Answer: Lion, Tiger, Wolf

Q. 421: Which are herbivores?

Answer: Cow, Rabbit, Deer

Q. 422: Animal with fingerprint like humans:

Answer: Koala

Q. 423: Dog hangs tongue out to:

Answer: Cool down (Panting)

Q. 424: Labrador is a breed of:

Answer: Dog

Q. 425: Scientific name of frog:

Answer: Rana

Q. 426: Snake that builds nest:

Answer: King Cobra

Q. 427: Largest cat family is:

Answer: Felidae

Q. 428: Animal that hunts in groups:

Answer: Lion

Q. 429: Largest bird is:

Answer: Ostrich

Q. 430: Bird that eats pebbles:

Answer: Chicken (or Ostrich)

Q. 431: Largest mammal:

Answer: Blue Whale

Q. 432: Birds are:

Answer: Warm-blooded animals

Q. 433: Penguin is:

Answer: Flightless bird

Q. 434: Maximum DDT deposition occurs in:

Answer: Top consumer (Tertiary consumer)

Q. 435: Reptiles hibernate in:

Answer: Winter

Q. 436: Long winter sleep is called:

Answer: Hibernation

Q. 437: Warm-blooded animals maintain temperature for:

Answer: Faster metabolism

Q. 438: Digestion starts from:

Answer: Mouth

Q. 439: Bile juice is produced in:

Answer: Liver

Q. 440: Bile is stored in:

Answer: Gall bladder

Q. 441: Acid in gastric juice:

Answer: Hydrochloric acid (HCl)

Q. 442: Duodenum and jejunum are parts of:

Answer: Small intestine

Q. 443: Pancreatic juice is secreted into:

Answer: Duodenum

Q. 444: Villi are found in:

Answer: Small intestine

Q. 445: Insulin is produced by:

Answer: Pancreas

Q. 446: Inflammation of appendix is called:

Answer: Appendicitis

Q. 447: Prevents constipation:

Answer: Fiber (Roughage)

Q. 448: Mastication means:

Answer: Chewing

Q. 449: Air finally reaches:

Answer: Alveoli

Q. 450: Asthma is caused by:

Answer: Allergens, pollution, stress, exercise

Q. 451: Insects breathe through:

Answer: Tracheae and spiracles

Q. 452: Frog respire through:

Answer: Skin, lungs, buccal cavity

Q. 453: Smoking causes:

Answer: Emphysema / chronic bronchitis

Q. 454: Lung capacity:

Answer: 4–6 liters

Q. 455: Main cause of lung cancer:

Answer: Smoking

Q. 456: Respiration rate:

Answer: 12–20 per minute

Q. 457: Diaphragm:

Answer: Muscle separating chest and abdomen

Q. 458: Fish breathe through:

Answer: Gills

Q. 459: Larynx (voice box) is located in:

Answer: Throat

Q. 460: In humans, which body part develops first?

Answer: Heart

Q. 461: How many chambers are in the human heart?

Answer: 4

Q. 462: Baby's heartbeat starts:

Answer: 3 weeks after conception

Q. 463: Volume of blood pumped out of heart is called:

Answer: Cardiac Output

Q. 464: Color of oxyhemoglobin is:

Answer: Bright red

Q. 465: Normal blood pressure is:

Answer: 120/80 mmHg

Q. 466: Normal heartbeat rate:

Answer: 60 to 100 beats per minute

Q. 467: Which chamber receives oxygenated blood?

Answer: Left atrium

Q. 468: Normal systolic blood pressure range:

Answer: 90 to 120 mmHg

Q. 469: Heart attack is caused by:

Answer: Blockage of blood flow to heart muscle

Q. 470: Average breathing per day:

Answer: 17,000 to 30,000 times

Q. 471: Excess post-exercise oxygen consumption is called:

Answer: EPOC (Oxygen debt)

Q. 472: Cardiorespiratory fitness test:

Answer: VO₂ max test

Q. 473: Upper body strength test:

Answer: Push-ups or bench press

Q. 474: ECG is used to monitor:

Answer: Heart

Q. 475: Blood volume in human body:

Answer: 4.5 to 5.5 liters

Q. 476: Cleaning of blood process is called:

Answer: Dialysis

Q. 477: Hemoglobin reacts with oxygen due to:

Answer: Iron

Q. 478: Sphygmomanometer measures:

Answer: Blood pressure

Q. 479: Who discovered blood circulation?

Answer: William Harvey

Q. 480: Increased SGOT/AST indicates:

Answer: Liver damage or heart attack

Q. 481: Blood clotting material:

Answer: Platelets and fibrin

Q. 482: Hemostasis is:

Answer: Process of stopping bleeding

Q. 483: Plasma contains water:

Answer: 90 to 92%

Q. 484: RBCs are formed in:

Answer: Bone marrow

Q. 485: Iron is necessary for:

Answer: Hemoglobin

Q. 486: Lifespan of RBCs:

Answer: 120 days

Q. 487: RBCs function:

Answer: Supply oxygen in blood

Q. 488: WBCs function:

Answer: Protect against infection

Q. 489: Leukocytes fight against:

Answer: Infections and diseases

Q. 490: Lifespan of WBCs:

Answer: 1 to 3 days (varies)

Q. 491: Universal donor blood group:

Answer: O negative (O—)

Q. 492: Carry blood to heart:

Answer: Veins

Q. 493: Carry blood away from heart:

Answer: Arteries

Q. 494: One-cell thick vessels:

Answer: Capillaries

Q. 495: Function of kidneys:

Answer: Filtration of blood and urine formation

Q. 496: Dialysis cleans:

Answer: Blood

Q. 497: Nitrogenous waste in urine:

Answer: Urea

Q. 498: Kidney stones form due to:

Answer: Calcium oxalate

Q. 499: Tube joining kidney and bladder:

Answer: Ureter

Q. 500: Excretion is removal of:

Answer: Waste substances (CO₂, urine, sweat)

Questions 501-600

Q. 501: Camera film is similar to:

Answer: Retina

Q. 502: Retina is like:

Answer: Camera film or sensor

Q. 503: Human eye is sensitive to:

Answer: Green and yellow-green light

Q. 504: Eye donation uses:

Answer: Cornea

Q. 505: Medulla oblongata is part of:

Answer: Brainstem

Q. 506: Temperature control part of brain:

Answer: Hypothalamus

Q. 507: Largest part of brain:

Answer: Cerebrum

Q. 508: Nerve cell is called:

Answer: Neuron

Q. 509: Average brain weight:

Answer: 1.3 to 1.4 kg

Q. 510: Bones contain water:

Answer: 14 to 17%

Q. 511: Exoskeleton of a marine snail is composed of:

Answer: Calcium Carbonate (CaCO_3)

Q. 512: Number of bones in a newborn baby:

Answer: 270 to 300 bones

Q. 513: Adult human has how many bones?

Answer: 206 bones

Q. 514: Bones in human hand:

Answer: 27 bones

Q. 515: Pairs of ribs in human body:

Answer: 12 pairs

Q. 516: Scapula is:

Answer: Shoulder blade

Q. 517: Longest and strongest bone:

Answer: Femur (Thigh bone)

Q. 518: Femur is located in:

Answer: Thigh

Q. 519: Smallest bone in human body:

Answer: Stapes (ear bone)

Q. 520: Incisors, canines, molars are:

Answer: Types of teeth

Q. 521: Hardest substance in human body:

Answer: Enamel

Q. 522: Wisdom teeth emerge at age:

Answer: 17 to 25 years

Q. 523: Animals without backbone are called:

Answer: Invertebrates

Q. 524: Which gland reduces in size with age?

Answer: Thymus gland

Q. 525: Organic compounds carried in blood are:

Answer: Hormones

Q. 526: Insulin is secreted by:

Answer: Pancreas (beta cells)

Q. 527: Which is NOT a function of bones?

Answer: Producing hormones for energy regulation

Q. 528: Milk production hormone:

Answer: Prolactin

Q. 529: Thyroid gland produces:

Answer: Thyroxine

Q. 530: Balanced diet includes balance, variety and:

Answer: Moderation (or adequacy)

Q. 531: Most important step in nutrient cycle:

Answer: Decomposition

Q. 532: Main ingredient of guacamole:

Answer: Avocado

Q. 533: Overcooking food should be avoided because:

Answer: Destroys heat-sensitive vitamins

Q. 534: Most difficult step in nutrient cycle:

Answer: Nitrogen fixation

Q. 535: Fructose is also called:

Answer: Fruit sugar

Q. 536: HPP means:

Answer: High Pressure Processing

Q. 537: Egg yolk protein is rich in:

Answer: Lipoproteins, vitamins, fats

Q. 538: Food fermentation is done by:

Answer: Bacteria or yeast

Q. 539: Vitamin A deficiency causes:

Answer: Night blindness

Q. 540: Vitamin A is found in:

Answer: Carrots, liver, green vegetables

Q. 541: Anti-cancer vitamins include:

Answer: Vitamins A, C, D, E

Q. 542: Beriberi is caused by deficiency of:

Answer: Vitamin B1 (Thiamine)

Q. 543: Vitamin produced by body:

Answer: Vitamin D

Q. 544: Water soluble vitamins:

Answer: Vitamin C and B-complex

Q. 545: Most water soluble vitamin:

Answer: Vitamin C

Q. 546: Vitamin B6 is:

Answer: Pyridoxine

Q. 547: Vitamin for tissue repair:

Answer: Vitamin C

Q. 548: Best source of Vitamin C:

Answer: Citrus fruits, guava, kiwi

Q. 549: Guava contains:

Answer: Vitamin C

Q. 550: Vitamin controlling browning of fruits:

Answer: Vitamin C

Q. 551: Vitamin D deficiency causes:

Answer: Rickets / Osteomalacia

Q. 552: Osteomalacia is due to deficiency of:

Answer: Vitamin D

Q. 553: Blood clotting vitamin:

Answer: Vitamin K

Q. 554: Influenza epidemic occurred in:

Answer: 1918–1919

Q. 555: Influenza is caused by:

Answer: Influenza virus

Q. 556: Malaria affects:

Answer: RBCs and liver cells

Q. 557: Malaria mainly affects:

Answer: Liver and spleen

Q. 558: Hepatitis mainly damages:

Answer: Liver

Q. 559: Inflammation of liver is:

Answer: Hepatitis

Q. 560: Cancer is:

Answer: Uncontrolled cell division disease

Q. 561: Cirrhosis affects:

Answer: Liver

Q. 562: Pneumonia is an inflammation of the lungs as a result of bacteria named:

Answer: Streptococcus pneumoniae

Q. 563: "Pneumonia" is an infection of the:

Answer: Lungs

Q. 564: Which of the following is caused by bacteria?

Answer: Tuberculosis, Typhoid, Cholera

Q. 565: Diabetes is caused due to malfunctioning of:

Answer: Pancreas

Q. 566: Which disease is caused by contaminated water?

Answer: Cholera, Typhoid, Dysentery

Q. 567: Diphtheria is a disease related to:

Answer: Throat and respiratory system

Q. 568: Tonsils in humans are located in which part of the body?

Answer: Throat (Pharynx)

Q. 569: "Tooth decay" caused due to deficiency of which mineral?

Answer: Fluoride

Q. 570: Goiter is caused by deficiency of:

Answer: Iodine

Q. 571: Iron deficiency in human body causes:

Answer: Anemia

Q. 572: Amnesia is related to:

Answer: Memory loss

Q. 573: Trachoma is a disease of the:

Answer: Eye

Q. 574: Myopia is a disease connected with:

Answer: Eye (Nearsightedness)

Q. 575: Cataract is a disease of?

Answer: Eye

Q. 576: An example of a hereditary disease is:

Answer: Hemophilia, Sickle Cell Anemia, Cystic Fibrosis

Q. 577: Hemophilia is a disorder related to:

Answer: Blood clotting

Q. 578: Highest number of deaths caused by:

Answer: Ischemic heart disease

Q. 579: Neck-breaking fever is:

Answer: Dengue Fever

Q. 580: Which of the following female mosquitoes acts as a carrier of Dengue virus?

Answer: Aedes aegypti

Q. 581: What type of illness is dengue?

Answer: Viral (Arbovirus)

Q. 582: What causes polio?

Answer: Poliovirus

Q. 583: A tetraplegia is a condition which refers to:

Answer: Paralysis of all four limbs

Q. 584: What is an Endemic disease?

Answer: A disease consistently present at a certain level in a specific area

Q. 585: In the early period which endemic is called Black Death:

Answer: Plague

Q. 586: If a large number of people suffer from a disease at one place and time, it is known as:

Answer: Epidemic

Q. 587: Virally infected cells produce and release small proteins called:

Answer: Interferons

Q. 588: Medicine that counteracts effects of poison is called as:

Answer: Antidote

Q. 589: What do you understand by the disease "Insomnia"?

Answer: Chronic inability to fall asleep or stay asleep

Q. 590: "Anorexia Nervosa" is a disease of:

Answer: Eating disorder (mental health disorder)

Q. 591: Is a non-viral disease:

Answer: Diabetes, Cholera, Cancer

Q. 592: Appendix is non-functional in:

Answer: Humans

Q. 593: At which temperature do bacteria die?

Answer: Above 60°C

Q. 594: During high temperatures in summer, it is recommended to drink plenty of water to avoid?

Answer: Dehydration and Heatstroke

Q. 595: Hydrophobia is a symptom of which of the following diseases?

Answer: Rabies

Q. 596: Fear of and prejudice against homosexuality is:

Answer: Homophobia

Q. 597: Fear of bathing:

Answer: Ablutophobia

Q. 598: Which instrument is used for measuring the humidity in the air?

Answer: Hygrometer

Q. 599: Which unit of measurement is primarily used to express the vast distances between different galaxies?

Answer: Parsec

Q. 600: What is the approximate structural shape of the Milky Way galaxy?

Answer: Spiral

Questions 601-700

Q. 601: Which galaxy is located closest to our own Milky Way galaxy?

Answer: Andromeda

Q. 602: One parsec is equivalent to how many light-years?

Answer: 3.26 light-years

Q. 603: Excluding the Sun, which star is located closest to our solar system at a distance of about 4.26 light-years?

Answer: Proxima Centauri

Q. 604: What is the correct life cycle evolutionary sequence for an average-sized star?

Answer: Nebula → Protostar → Red Giant → Planetary Nebula → White Dwarf

Q. 605: Which type of stellar system consists of two stars orbiting around a common center of mass?

Answer: Binary star

Q. 606: What is the approximate age of the Sun?

Answer: 4.6 billion years

Q. 607: The time taken by the Sun to complete one single revolution around the center of the Milky Way galaxy is known as a:

Answer: Galactic year

Q. 608: What are the two most abundant chemical elements that compose the Sun?

Answer: Hydrogen and Helium

Q. 609: What is the name of the outermost atmospheric layer of the Sun, which exhibits an extremely high temperature of around 300,000 Kelvin?

Answer: Corona

Q. 610: The deepest, lowest layer of the solar atmosphere that is directly visible to the human eye is called the:

Answer: Photosphere

Q. 611: One Astronomical Unit (AU) represents the average distance between which two celestial bodies?

Answer: Sun and Earth

Q. 612: Approximately how long does it take for sunlight to travel from the Sun to the Earth?

Answer: 499 seconds

Q. 613: The internal layer of the Sun where nuclear fusion reactions continuously take place to produce its core heat is the:

Answer: Core

Q. 614: What is the name given to the smallest discrete packet or quantum of light energy?

Answer: Photon

Q. 615: Which specific type of solar electromagnetic waves is utilized in television remotes and microwave ovens?

Answer: Infrared rays

Q. 616: Which method of heat transfer is defined as the movement of heat energy through waves without needing a physical medium?

Answer: Radiation

Q. 617: The apparent force that acts outward, pushing a rotating object away from the center of its circular path due to inertia, is called:

Answer: Centrifugal force

Q. 618: Which force acts continuously to pull an object inward toward the center of its circular path?

Answer: Centripetal force

Q. 619: A satellite is scientifically defined as any celestial or artificial body that revolves around:

Answer: Planets, Dwarf Planets, Asteroids, or Stars

Q. 620: Low Earth Orbit (LEO) satellites, primarily used for weather updates, operate at an altitude of:

Answer: 200–500 km

Q. 621: Which of the following satellite layers is explicitly utilized for Global Positioning System (GPS) and communication systems?

Answer: MEO

Q. 622: Geostationary Earth Orbit (GEO) satellites used for global broadcasting are positioned at a height of approximately:

Answer: 40,000 km

Q. 623: Due to its proximity to Earth, the Moon exerts a gravitational effect on Earth's oceans that is _____ compared to the Sun.

Answer: Double in power

Q. 624: The approximate time taken by reflected moonlight to reach the surface of the Earth is:

Answer: 1.28 seconds

Q. 625: The dark, flat plains found on the surface of the Moon are traditionally referred to as:

Answer: Lunar Seas

Q. 626: Ocean tides are a planetary phenomenon primarily caused by the:

Answer: Gravitational pull of the Moon and Sun combined with Earth's rotation

Q. 627: When the Sun, Earth, and Moon line up perfectly in a straight line, the resulting tides are called:

Answer: Spring Tides

Q. 628: Spring Tides are characterized by which of the following environmental conditions?

Answer: The highest high tides and lowest low tides

Q. 629: How many times does a Spring Tide occur during a standard lunar month?

Answer: Twice

Q. 630: Spring Tides occur exclusively during which specific phases of the Moon?

Answer: New Moon and Full Moon

Q. 631: When the Sun and the Moon form a 90-degree angle ("L" shape) with the Earth, the tides produced are:

Answer: Neap Tides

Q. 632: Why do Neap Tides produce weak tidal changes where the difference between high and low water is small?

Answer: The Sun and Moon pull in different directions, cancelling each other out

Q. 633: Neap Tides happen twice a month during which phase of the Moon cycle?

Answer: Half Moons (Quarter Moons)

Q. 634: The strip of irregular-shaped particles and moving celestial debris located between Jupiter and Earth is known as the:

Answer: Comet strip / Asteroid Belt

Q. 635: Which celestial belt is located further out past the planet Neptune, within which Pluto resides?

Answer: Kuiper Belt

Q. 636: Small, tiny particles made of gases that often appear in the night sky as "burning stars" are termed as:

Answer: Meteoroids

Q. 637: According to astronomical criteria, a dwarf planet is spherical and orbits the Sun but fails because it:

Answer: Has not cleared its orbit of revolution

Q. 638: In which year was Pluto formally stripped of its status as a major planet and reclassified as a dwarf planet?

Answer: 2006

Q. 639: Which moon is recognized as the largest natural satellite in our entire solar system?

Answer: Ganymede

Q. 640: Ganymede is a natural satellite belonging to which planet?

Answer: Jupiter

Q. 641: The planet Mercury is smaller in size than which of the following moons?

Answer: Ganymede

Q. 642: Titan is a unique moon that orbits which planet?

Answer: Saturn

Q. 643: Which moon is distinct for having a thick, dense atmosphere along with surface lakes made of liquid methane?

Answer: Titan

Q. 644: Which of the following is famously known as the smallest natural moon in the solar system?

Answer: Deimos

Q. 645: Deimos is one of the natural satellites that revolves around the planet:

Answer: Mars

Q. 646: Which moon is covered completely in ice, hiding a vast underground ocean of liquid water?

Answer: Europa

Q. 647: Triton, a moon famous for its backward or retrograde orbit, belongs to which planet?

Answer: Neptune

Q. 648: A retrograde orbit means that a moon travels in a direction that is:

Answer: Opposite to the direction of the planet's spin

Q. 649: Who among the following astronomers mathematically explained planetary motion in the solar system?

Answer: Johannes Kepler

Q. 650: What are the two distinct planetary movements responsible for creating seasons and the day-and-night cycle on Earth?

Answer: Revolution causes seasons, while rotation causes day and night

Q. 651: Which of the following groups consists entirely of Terrestrial planets?

Answer: Mercury, Venus, Earth, Mars

Q. 652: Between which two planets does the Asteroid Belt reside within the solar system?

Answer: Mars and Jupiter

Q. 653: Which planet has the shortest orbital period (one year = 88 days) and has no atmosphere?

Answer: Mercury

Q. 654: Which planet is the slowest rotating planet in our solar system, resulting in the longest day-and-night period?

Answer: Venus

Q. 655: Which planet is known as Earth's twin due to its highly similar size and mass?

Answer: Venus

Q. 656: Which two planets in our solar system exhibit a clockwise (East to West) rotation?

Answer: Venus and Uranus

Q. 657: What is the approximate equatorial circumference of the Earth?

Answer: 40,075 km

Q. 658: What is the exact time required for the Earth to complete one full rotation on its axis?

Answer: 23 hours 56 minutes 04 seconds

Q. 659: What is the composition of major gases in Earth's atmosphere by percentage?

Answer: Nitrogen = 78%, Oxygen = 21%, Argon = 0.9%, Carbon Dioxide = 0.03–0.04%

Q. 660: Which planet is designated as the "Red Planet" due to the abundant presence of iron?

Answer: Mars

Q. 661: Which planet is the largest in the solar system, possesses 80 natural satellites, and rotates the fastest (in under 10 hours)?

Answer: Jupiter

Q. 662: The prominent, visible rings orbiting Saturn were first discovered using a telescope by:

Answer: Galileo Galilei

Q. 663: Which planet is distinctly green in appearance due to the prevalence of methane gas in its atmosphere?

Answer: Uranus

Q. 664: Which planet is the farthest from the Sun and is classified as the coldest planet in the solar system?

Answer: Neptune

Q. 665: In which year was Pluto officially excluded from the list of solar system planets by astronomers?

Answer: 2006

Q. 666: In which region of the outer solar system does the dwarf planet Pluto reside?

Answer: Kuiper Belt

Q. 667: Which pair of planets in the solar system possess absolutely no natural satellites (moons)?

Answer: Mercury and Venus

Q. 668: How many times larger is the radius of the Sun compared to the radius of the Earth?

Answer: 109 times

Q. 669: An eclipse occurs due to one heavenly body moving into the shadow of another, which is a direct result of light traveling in straight lines. This property of light is called?

Answer: Rectilinear propagation of light

Q. 670: During a solar eclipse (سورج گرہن), which celestial body is positioned directly in the middle?

Answer: Moon

Q. 671: A solar eclipse can only take place during which specific phase of the Moon?

Answer: New Moon

Q. 672: Why does a solar eclipse typically last for only a few minutes at any given location on Earth?

Answer: The Moon's shadow moves very fast across the Earth's surface

Q. 673: Which type of special protective eyewear is explicitly required to safely view a solar eclipse?

Answer: Standard sunglasses

Q. 674: Which specific Islamic prayer is offered in congregation during a Solar Eclipse?

Answer: Namaz-e-Kusuf

Q. 675: During a lunar eclipse (چاند گرہن), what is the correct order of alignment of the celestial bodies?

Answer: Sun — Earth — Moon

Q. 676: A lunar eclipse is a planetary event that always occurs exclusively during a:

Answer: Full Moon

Q. 677: Why does a lunar eclipse last much longer (often up to a few hours) compared to a solar eclipse?

Answer: The Earth casts a significantly larger shadow than the Moon

Q. 678: Which of the following statements is correct regarding the safety and spiritual practice of a Lunar Eclipse?

Answer: It is safe to view with the naked eye, and Namaz-e-Khusuf is performed

Q. 679: During an equinox, the Sun is directly over the:

Answer: Equator

Q. 680: Equinox results in:

Answer: Equal day and night

Q. 681: The March Equinox generally occurs on:

Answer: Mar 20–21

Q. 682: The September Equinox generally occurs on:

Answer: Sep 22–23

Q. 683: A solstice occurs when the Sun reaches its:

Answer: Highest or lowest point

Q. 684: The Summer Solstice in the Northern Hemisphere occurs around:

Answer: Jun 20–21

Q. 685: The Winter Solstice occurs around:

Answer: Dec 21–22

Q. 686: Which event produces the longest day of the year?

Answer: Solstice

Q. 687: Who was the first man to travel into space?

Answer: Yuri Gagarin

Q. 688: Who was the first woman to travel into space?

Answer: Valentina Tereshkova

Q. 689: Who was the first man to walk in space?

Answer: Alexei Leonov

Q. 690: Who was the first woman to walk in space?

Answer: Svetlana Savitskaya

Q. 691: Who was the first American woman in space?

Answer: Sally Ride

Q. 692: Who was the first Chinese woman in space?

Answer: Liu Yang

Q. 693: Who was the first Arab woman in space?

Answer: Reyana Barnawi

Q. 694: SUPARCO was established in:

Answer: 1961

Q. 695: The founder of SUPARCO was:

Answer: Dr. Abdus Salam

Q. 696: Pakistan launched Rehbar-1 in:

Answer: 1962

Q. 697: Pakistan's first domestically built digital communications satellite was:

Answer: Badr-1

Q. 698: Pakistan launched the lunar-orbiting iCube-Qamar mission in:

Answer: 2024

Q. 699: Which Greek philosopher is traditionally recognized as the "Father of Geography" and was the first to measure the radius and circumference of the Earth?

Answer: Eratosthenes

Q. 700: Al-Biruni calculated the radius of the Earth by choosing which historic fort for his scientific experiment using trigonometry and the angle of the horizon?

Answer: Nandana Fort

Questions 701-800

Q. 701: Al-Biruni's scientific experiment to determine the Earth's radius was performed near Pind Dadan Khan in which district of Pakistan?

Answer: Jhelum

Q. 702: What value did Al-Biruni calculate for the radius of the Earth, achieving an accuracy of over 99.7%?

Answer: 6,335.7 kilometers

Q. 703: To date, what is the deepest depth humans have ever drilled into the Earth's interior, a feat accomplished in Russia?

Answer: 12 km

Q. 704: Magma is the liquid form of metals and minerals beneath the Earth's surface. What is the correct chemical composition formula for magma?

Answer: Magma = Lava + Gas

Q. 705: The actual radius of the Earth is approximately:

Answer: 6,378 km

Q. 706: The total diameter of the Earth is measured at approximately:

Answer: 12,756 km

Q. 707: The total linear distance around the Earth, known as its circumference, is approximately:

Answer: 40,075 km

Q. 708: What is the total surface area of the Earth?

Answer: 510,072,000 km²

Q. 709: The approximate average distance between the Sun and the Earth is estimated to be:

Answer: 150 Million km

Q. 710: According to geological estimates, the Earth was formed approximately how many years ago?

Answer: 4.56 Billion years ago

Q. 711: In terms of orbital distance from the Sun, Earth occupies which position among the planets?

Answer: Third

Q. 712: In terms of physical size, Earth ranks as the _____ largest planet in our solar system.

Answer: Fifth

Q. 713: Due to the abundant presence of water on its surface, Earth is frequently referred to as the:

Answer: Blue Planet

Q. 714: The actual physical shape of the Earth is an idealized ellipsoid that is flattened at its top (poles) and bulged at its center (equator). This unique shape is termed a:

Answer: Geoid

Q. 715: Which mechanical layer of the Earth, ranging from 100 to 400 km deep, is characterized as the weakest layer due to its semi-fluid, plastic nature?

Answer: Asthenosphere

Q. 716: The deeper, more rigid mechanical layer of the mantle located beneath the asthenosphere is called the:

Answer: Mesosphere

Q. 717: An element that is typically solid at room temperature, shiny, malleable, ductile, and an excellent conductor of heat and electricity is defined as a:

Answer: Metal

Q. 718: Which of the following groups consists entirely of elements classified as non-metals?

Answer: Oxygen, Carbon, Sulfur, Phosphorus

Q. 719: Elements like Silicon, Boron, Arsenic, and Antimony exhibit properties intermediate between metals and non-metals and are termed as:

Answer: Metalloids

Q. 720: A conductor allows electric current to flow easily because of the abundant presence of:

Answer: Free-moving electrons

Q. 721: Which of the following pairs of metals are primarily used in electrical wiring and power lines respectively due to their high conductivity?

Answer: Copper and Aluminum

Q. 722: Materials like rubber, plastic, and wood that structurally resist the flow of electric current are commercially utilized as:

Answer: Insulators (Non-conductors)

Q. 723: The electrical conductivity of a semiconductor can be deliberately modified and controlled through a process called:

Answer: Doping (adding impurities)

Q. 724: Silicon and Germanium are widely used in microchips, solar panels, and transistors because they act as:

Answer: Semiconductors

Q. 725: Which of the following materials is traditionally utilized in light bulb filaments and heating elements due to its high resistance?

Answer: Tungsten

Q. 726: A superconductor is a unique material that conducts electricity with absolutely zero resistance when it is:

Answer: Cooled below a specific critical temperature

Q. 727: Mercury achieves a state of superconductivity when it is cooled below which specific critical temperature?

Answer: 4.2 K

Q. 728: Lead and Niobium exhibit superconducting properties below their respective critical temperatures of:

Answer: 7.2 K and 9.2 K

Q. 729: Materials like clear glass, water, and air that allow light to pass through completely without significant scattering are described as:

Answer: Transparent

Q. 730: Wood, metal, stone, and brick block the passage of light entirely, making them classic examples of:

Answer: Opaque materials

Q. 731: A material like frosted glass or wax paper that allows some light to pass through but scatters it, preventing objects from being seen clearly, is called:

Answer: Translucent

Q. 732: The branch of geology that deals with the study of minerals is called:

Answer: Mineralogy

Q. 733: Who is known as the Father of Mineralogy?

Answer: Georgius Agricola

Q. 734: Minerals are the building blocks of:

Answer: Rocks

Q. 735: A mineral is best defined as a:

Answer: Naturally occurring inorganic solid

Q. 736: Minerals have a:

Answer: Definite chemical composition

Q. 737: Minerals are broadly classified into:

Answer: Two groups

Q. 738: Which of the following is a metallic mineral?

Answer: Copper

Q. 739: Ferrous minerals contain:

Answer: Iron

Q. 740: Which of the following is a ferrous mineral?

Answer: Chromite

Q. 741: Non-ferrous minerals are minerals that:

Answer: Do not contain iron

Q. 742: Which property is characteristic of metallic minerals?

Answer: Metallic luster

Q. 743: Which of the following is a non-metallic mineral?

Answer: Limestone

Q. 744: Minerals that do not possess metallic luster, are poor conductors, and break easily are known as:

Answer: Non-metallic minerals

Q. 745: A rock is:

Answer: A combination of one or more minerals

Q. 746: Rocks differ from minerals because rocks:

Answer: Have no definite chemical composition

Q. 747: Rocks are classified into how many major groups?

Answer: Three

Q. 748: Igneous rocks are formed by:

Answer: Cooling and solidification of molten rock

Q. 749: Molten rock beneath the Earth's surface is called:

Answer: Magma

Q. 750: Molten rock on the Earth's surface is called:

Answer: Lava

Q. 751: Which rock is an igneous rock?

Answer: Granite

Q. 752: Igneous rocks are also known as:

Answer: Primary rocks

Q. 753: Sedimentary rocks are formed:

Answer: Layer by layer from sediments

Q. 754: Which of the following rocks commonly contains fossils?

Answer: Sedimentary

Q. 755: Which process breaks rocks into sediments?

Answer: Weathering

Q. 756: Which of the following is a sedimentary rock?

Answer: Sandstone

Q. 757: Metamorphic rocks are formed by:

Answer: Heat and pressure acting on existing rocks

Q. 758: Slate is formed from:

Answer: Shale

Q. 759: During metamorphism, rocks:

Answer: Are transformed without melting

Q. 760: The continuous transformation of rocks is called:

Answer: Rock cycle

Q. 761: Which mineral is the hardest naturally occurring substance?

Answer: Diamond

Q. 762: Diamond is composed of:

Answer: Carbon

Q. 763: The softest known mineral is:

Answer: Talc

Q. 764: Who developed the Mohs hardness scale?

Answer: Friedrich Mohs

Q. 765: The Mohs hardness scale contains:

Answer: 10 minerals

Q. 766: Diamond has a Mohs hardness value of:

Answer: 10

Q. 767: Talc has a Mohs hardness value of:

Answer: 1

Q. 768: Which mineral has a hardness value of 7 on the Mohs scale?

Answer: Quartz

Q. 769: The Mohs scale measures:

Answer: Scratch resistance

Q. 770: A human fingernail has an approximate hardness of:

Answer: 2.5

Q. 771: A steel knife blade can test minerals with a hardness of about:

Answer: 5.5

Q. 772: The most abundant element in the Earth's crust is:

Answer: Oxygen

Q. 773: The second most abundant element in the Earth's crust is:

Answer: Silicon

Q. 774: The most abundant metal in the Earth's crust is:

Answer: Aluminum

Q. 775: The second most abundant metal in the Earth's crust is:

Answer: Iron

Q. 776: The most abundant mineral group in the Earth's crust is:

Answer: Feldspar

Q. 777: The second most abundant individual mineral in the continental crust is:

Answer: Quartz

Q. 778: The most abundant element in the Earth as a whole planet is:

Answer: Iron

Q. 779: Zircon crystals are important because they are:

Answer: The oldest known materials on Earth

Q. 780: Weathering is the process in which rocks:

Answer: Break down in place

Q. 781: Erosion is the process by which:

Answer: Rock particles are transported elsewhere

Q. 782: Deposition occurs when:

Answer: Sediments settle in a new location

Q. 783: The scientific study of earthquakes and the movement of energy through the Earth is called:

Answer: Seismology

Q. 784: Scientists who study earthquakes are known as:

Answer: Seismologists

Q. 785: An earthquake begins deep underground at a point called the:

Answer: Focus (Hypocenter)

Q. 786: Another name for the focus of an earthquake is:

Answer: Hypocenter

Q. 787: The point on the Earth's surface directly above the focus is called the:

Answer: Epicenter

Q. 788: The epicenter is located:

Answer: Directly above the focus on the surface

Q. 789: Earthquakes occur due to the sudden release of:

Answer: Energy

Q. 790: The vibrations produced by an earthquake are known as:

Answer: Seismic waves

Q. 791: Seismic waves travel through:

Answer: The Earth

Q. 792: The instrument used to detect and record earthquake waves is called a:

Answer: Seismograph

Q. 793: A seismograph is used to:

Answer: Record seismic waves

Q. 794: Seismic waves travel:

Answer: At different speeds

Q. 795: Which seismic waves are the fastest?

Answer: Primary waves (P-waves)

Q. 796: Which seismic waves arrive first at monitoring stations?

Answer: P-waves

Q. 797: The letter "P" in P-waves stands for:

Answer: Primary

Q. 798: Surface waves travel:

Answer: Along the Earth's surface

Q. 799: Which seismic waves move more slowly than P-waves?

Answer: Surface waves

Q. 800: The most destructive seismic waves are:

Answer: Surface waves

Questions 801-900

Q. 801: Surface waves cause the greatest damage to:

Answer: Buildings and landscapes

Q. 802: Which statement is correct?

Answer: P-waves are the fastest seismic waves.

Q. 803: Who proposed the Continental Drift Theory in 1912?

Answer: Alfred Wegener

Q. 804: The Continental Drift Theory was proposed in:

Answer: 1912

Q. 805: According to Wegener, all continents were once joined into a single supercontinent called:

Answer: Pangaea

Q. 806: Pangaea existed approximately:

Answer: 200–300 million years ago

Q. 807: The global ocean surrounding Pangaea was known as:

Answer: Panthalassa

Q. 808: Wegener estimated continental drift at about:

Answer: 2–5 cm/year

Q. 809: The Continental Drift Theory was largely rejected because:

Answer: No physical mechanism was provided

Q. 810: During which decades was Continental Drift widely rejected?

Answer: 1920s–1930s

Q. 811: The modern theory explaining continental movement is:

Answer: Plate Tectonics Theory

Q. 812: Plate Tectonics became widely accepted during the:

Answer: 1960s

Q. 813: The Earth's outer rigid shell is called the:

Answer: Lithosphere

Q. 814: The lithosphere is divided into:

Answer: 7 major plates

Q. 815: The largest tectonic plate is the:

Answer: Pacific Plate

Q. 816: The Pacific Plate covers more than:

Answer: 100 million km²

Q. 817: Tectonic plates move at an average speed of:

Answer: 2–5 cm/year

Q. 818: The speed of tectonic plate movement is comparable to:

Answer: Human fingernail growth

Q. 819: Plate movement is driven by:

Answer: Thermal convection currents

Q. 820: Thermal convection currents occur in the:

Answer: Mantle

Q. 821: The mantle extends to a depth of about:

Answer: 2,900 km

Q. 822: The Ring of Fire is located around the:

Answer: Pacific Basin

Q. 823: The Ring of Fire is approximately:

Answer: 40,000 km long

Q. 824: The Ring of Fire accounts for more than what percentage of the world's earthquakes?

Answer: 90%

Q. 825: About what percentage of Earth's active volcanoes are located in the Ring of Fire?

Answer: 75%

Q. 826: The Himalayan Mountains were formed by the collision of:

Answer: Indian and Eurasian Plates

Q. 827: The Indian Plate collided with the Eurasian Plate approximately:

Answer: 40–50 million years ago

Q. 828: The Himalayas continue to rise at about:

Answer: 1 cm/year

Q. 829: The scientific study of fossils is called:

Answer: Paleontology

Q. 830: Scientists who study fossils are known as:

Answer: Paleontologists

Q. 831: A fossil is:

Answer: A preserved remain or trace of ancient life

Q. 832: Fossils provide evidence about:

Answer: Biological evolution and Earth's history

Q. 833: A fuel is any substance that releases usable:

Answer: Energy

Q. 834: Fossil fuels are formed from:

Answer: Ancient organic matter

Q. 835: Which of the following is NOT a fossil fuel?

Answer: Granite

Q. 836: The three main fossil fuels are:

Answer: Petroleum, Coal, Natural Gas

Q. 837: Fossil fuels require which conditions for formation?

Answer: High heat and pressure

Q. 838: Hydrocarbons are composed mainly of:

Answer: Carbon and Hydrogen

Q. 839: The primary chemical basis of fossil fuels is:

Answer: Hydrocarbons

Q. 840: Fossil fuels are classified as:

Answer: Non-renewable resources

Q. 841: Non-renewable resources cannot be replenished within:

Answer: A human lifespan

Q. 842: Most fossils are found in:

Answer: Sedimentary rocks

Q. 843: Why are fossils rarely found in igneous rocks?

Answer: Extreme heat destroys remains

Q. 844: Why are fossils uncommon in metamorphic rocks?

Answer: Extreme heat and pressure alter fossils

Q. 845: Which rock type is the best source for fossil discoveries?

Answer: Sedimentary rocks

Q. 846: Fossils help scientists determine:

Answer: Evolutionary patterns and geological history

Q. 847: Which statement is correct?

Answer: Sedimentary rocks contain most fossils

Q. 848: Meteorology is the scientific study of:

Answer: Atmosphere and weather patterns

Q. 849: A scientist who observes and predicts weather is called a:

Answer: Meteorologist

Q. 850: Climate is the average weather of an area over approximately:

Answer: 30 years

Q. 851: The lowest layer of the atmosphere where weather occurs is the:

Answer: Troposphere

Q. 852: Clouds, rain, and storms mainly occur in the:

Answer: Troposphere

Q. 853: A barometer is used to measure:

Answer: Air pressure

Q. 854: Which instrument measures atmospheric pressure?

Answer: Barometer

Q. 855: An anemometer measures:

Answer: Wind speed

Q. 856: Wind speed is measured by a:

Answer: Anemometer

Q. 857: A wind vane is used to determine:

Answer: Wind direction

Q. 858: A hygrometer measures:

Answer: Humidity

Q. 859: Humidity refers to the amount of:

Answer: Moisture in the air

Q. 860: A rain gauge is used to measure:

Answer: Rainfall

Q. 861: Isobars connect places having the same:

Answer: Air pressure

Q. 862: Lines joining places of equal air pressure are called:

Answer: Isobars

Q. 863: Isotherms connect places having the same:

Answer: Temperature

Q. 864: High air pressure generally brings:

Answer: Clear and calm weather

Q. 865: Low air pressure is commonly associated with:

Answer: Clouds and storms

Q. 866: Which weather condition is usually linked with low pressure?

Answer: Stormy weather

Q. 867: Which instrument would best measure rainfall?

Answer: Rain gauge

Q. 868: Geomorphology is the scientific study of:

Answer: Landforms and surface processes

Q. 869: Geomorphology mainly deals with:

Answer: Landforms and their origin

Q. 870: Orogeny is the process of:

Answer: Mountain building

Q. 871: Orogeny is mainly caused by:

Answer: Tectonic plate collision

Q. 872: The world's largest and highest plateau is the:

Answer: Tibetan Plateau

Q. 873: The Tibetan Plateau is often called:

Answer: Roof of the World

Q. 874: U-shaped valleys are formed by:

Answer: Glaciers

Q. 875: A U-shaped valley is characterized by:

Answer: Wide flat bottom and steep sides

Q. 876: V-shaped valleys are mainly formed by:

Answer: River erosion

Q. 877: Which landform is associated with river cutting action?

Answer: V-shaped valley

Q. 878: Meanders are:

Answer: River bends and loops

Q. 879: Meanders are typically:

Answer: S-shaped curves

Q. 880: Endogenic forces originate:

Answer: Deep inside the Earth

Q. 881: Which is an example of an endogenic force?

Answer: Earthquake

Q. 882: Endogenic forces generally:

Answer: Build up landforms

Q. 883: Exogenic forces operate:

Answer: On the Earth's surface

Q. 884: Which is an example of an exogenic force?

Answer: Wind erosion

Q. 885: Exogenic forces mainly:

Answer: Wear down landforms

Q. 886: Epeirogeny refers to:

Answer: Slow uplift or sinking of the crust

Q. 887: Epeirogeny helps form:

Answer: Continents and plateaus

Q. 888: A delta forms at the:

Answer: Mouth of a river

Q. 889: A delta is formed by:

Answer: Sediment deposition

Q. 890: The shape of a typical delta is:

Answer: Triangular

Q. 891: Which force is responsible for volcano formation?

Answer: Endogenic force

Q. 892: Which pair is correctly matched?

Answer: Meander — River loops

Q. 893: Which pair is correctly matched?

Answer: Hygrometer — Humidity

Q. 894: Which pair is correctly matched?

Answer: Barometer — Air pressure

Q. 895: Which statement is correct?

Answer: High pressure is associated with calm weather.

Q. 896: Which statement about geomorphology is correct?

Answer: It studies landforms and their development.

Q. 897: Which statement is correct?

Answer: Endogenic forces build landforms; exogenic forces wear them down.

Q. 897: Water is a compound made of:

Answer: Hydrogen and Oxygen

Q. 898: The chemical formula of water is:

Answer: H₂O

Q. 899: One molecule of water contains:

Answer: 2 Hydrogen and 1 Oxygen atom

Q. 900: Water naturally exists in:

Answer: Three states

Questions 901-1000

Q. 901: Water is often called the:

Answer: Universal Solvent

Q. 902: Pure water freezes at:

Answer: 0°C

Q. 903: Pure water boils at standard pressure at:

Answer: 100°C

Q. 904: Water reaches its maximum density at:

Answer: 4°C

Q. 905: Ice floats on water because:

Answer: Ice is less dense than water

Q. 906: Approximately what percentage of Earth's surface is covered by water?

Answer: 71%

Q. 907: About what percentage of Earth's water is salt water?

Answer: 97%

Q. 908: Fresh water makes up approximately:

Answer: 3%

Q. 909: Hydrology is the scientific study of:

Answer: Fresh water

Q. 910: Oceanography is the scientific study of:

Answer: Salt water bodies

Q. 911: The continuous movement of water on Earth is called the:

Answer: Water Cycle

Q. 912: Evaporation is the conversion of:

Answer: Liquid water into water vapor

Q. 913: Transpiration occurs through:

Answer: Plants

Q. 914: Condensation forms:

Answer: Clouds

Q. 915: Rain, snow, sleet, and hail are forms of:

Answer: Precipitation

Q. 916: Infiltration is:

Answer: Water soaking into soil

Q. 917: Percolation is:

Answer: Downward movement of water through soil and rock

Q. 918: Groundwater is stored:

Answer: Beneath the Earth's surface

Q. 919: An aquifer is:

Answer: An underground water-bearing layer

Q. 920: The water table is:

Answer: The upper level of saturated groundwater

Q. 921: Runoff is:

Answer: Water flowing over land into rivers and lakes

Q. 922: Surface water includes:

Answer: Rivers, lakes, and wetlands

Q. 923: About what percentage of global freshwater withdrawals are used for agriculture?

Answer: 70%

Q. 924: Ocean salinity averages:

Answer: 35‰

Q. 925: Salinity refers to:

Answer: Dissolved salt concentration

Q. 926: Desalination is the process of:

Answer: Removing salt from seawater

Q. 927: The largest ocean in the world is the:

Answer: Pacific Ocean

Q. 928: The smallest ocean is the:

Answer: Arctic Ocean

Q. 929: The deepest point on Earth, the Mariana Trench, is located in the:

Answer: Pacific Ocean

Q. 930: The Mariana Trench is approximately:

Answer: 10,984 m deep

Q. 931: The longest river in the world is the:

Answer: Nile River

Q. 932: The river with the greatest water discharge is the:

Answer: Amazon

Q. 933: The longest river in Asia is the:

Answer: Yangtze

Q. 934: The longest river in Pakistan is the:

Answer: Indus

Q. 935: The world's longest canal is the:

Answer: Grand Canal of China

Q. 936: The Suez Canal connects the:

Answer: Mediterranean Sea and Red Sea

Q. 937: The Suez Canal is located in:

Answer: Egypt

Q. 938: The Suez Canal officially opened in:

Answer: 1869

Q. 939: The largest glacier in the world is:

Answer: Lambert Glacier

Q. 940: Siachen Glacier is located in:

Answer: Trans-Himalayas

Q. 941: An isthmus is:

Answer: A narrow strip of land joining two landmasses

Q. 942: The Isthmus of Panama connects:

Answer: North and South America

Q. 943: A strait is:

Answer: Narrow water connecting two water bodies

Q. 944: The longest strait in the world is the:

Answer: Malacca Strait

Q. 945: The world's largest island is:

Answer: Greenland

Q. 946: The world's largest saltwater lake is:

Answer: Caspian Sea (Lake)

Q. 947: A peninsula is land surrounded by water on:

Answer: Three sides

Q. 948: The world's largest peninsula is the:

Answer: Arabian Peninsula

Q. 949: The largest gulf in the world is the:

Answer: Gulf of Mexico

Q. 950: The Bay of Bengal is an example of a:

Answer: Bay

Q. 951: The world's largest bight is the:

Answer: Great Australian Bight

Q. 952: Which beach is mentioned as an example in Pakistan?

Answer: Clifton Beach

Q. 953: Which pair is correctly matched?

Answer: Aquifer — Underground water-bearing layer

Q. 954: Which pair is correctly matched?

Answer: Yangtze — Longest river in Asia

Q. 955: Which pair is correctly matched?

Answer: Lambert Glacier — Largest glacier

Q. 956: Which statement is correct?

Answer: Hydrology studies fresh water and the water cycle.

Q. 957: Environment refers to:

Answer: Surroundings including living and non-living things

Q. 958: Main source of energy for Earth is:

Answer: Sun

Q. 959: Layer of gases surrounding Earth is called:

Answer: Atmosphere

Q. 960: Lowest layer of atmosphere is:

Answer: Troposphere

Q. 961: Most weather phenomena occur in:

Answer: Troposphere

Q. 962: Ozone layer is found in:

Answer: Stratosphere

Q. 963: Ozone protects Earth from:

Answer: Ultraviolet rays

Q. 964: Most abundant gas in atmosphere is:

Answer: Nitrogen

Q. 965: Nitrogen percentage in atmosphere is about:

Answer: 78%

Q. 966: Oxygen percentage in atmosphere is about:

Answer: 21%

Q. 967: Carbon dioxide percentage is approximately:

Answer: 0.04%

Q. 968: Gas essential for respiration is:

Answer: Oxygen

Q. 969: Plants use which gas for photosynthesis?

Answer: Carbon Dioxide

Q. 970: Hottest atmospheric layer is:

Answer: Thermosphere

Q. 971: Coldest atmospheric layer is:

Answer: Mesosphere

Q. 972: Meteors usually burn up in:

Answer: Mesosphere

Q. 973: Aurora Borealis occurs in:

Answer: Thermosphere

Q. 974: Greenhouse effect is caused by:

Answer: Greenhouse gases

Q. 975: Major greenhouse gas is:

Answer: Carbon Dioxide

Q. 976: Acid rain is mainly caused by:

Answer: Sulfur dioxide & Nitrogen oxides

Q. 977: Sphere containing all water on Earth is:

Answer: Hydrosphere

Q. 978: Sphere containing all living organisms is:

Answer: Biosphere

Q. 979: Solid outer part of Earth is called:

Answer: Lithosphere

Q. 980: Air pressure is measured by:

Answer: Barometer

Q. 981: Humidity is measured by:

Answer: Hygrometer

Q. 982: Wind speed is measured by:

Answer: Anemometer

Q. 983: Rainfall is measured by:

Answer: Rain Gauge

Q. 984: Global warming means:

Answer: Increase in Earth's average temperature

Q. 985: Boundary between Troposphere and Stratosphere is:

Answer: Tropopause

Q. 986: Outermost atmospheric layer is:

Answer: Exosphere

Q. 987: Biology is the branch of science that studies which of the following?

Answer: Living organisms and vital processes

Q. 988: What is the scientific study of animals called?

Answer: Zoology

Q. 989: The word "Zoo" literally means:

Answer: Animal

Q. 990: Who is recognized as the Father of Biology?

Answer: Aristotle

Q. 991: Who is recognized as the Father of Zoology?

Answer: Aristotle

Q. 992: Which branch of biology is dedicated to the study of plants?

Answer: Botany

Q. 993: What does the word "Botane" mean?

Answer: Pasture or herb

Q. 994: Who is known as the Father of Botany?

Answer: Theophrastus

Q. 995: What is the study of microscopic organisms like bacteria and viruses called?

Answer: Microbiology

Q. 996: Who is considered the Father of Microbiology?

Answer: Antoine van Leeuwenhoek / Louis Pasteur

Q. 997: What is defined as the basic building block of life (e.g., a muscle cell)?

Answer: Cell

Q. 998: A group of similar cells working together (e.g., muscle tissue) is called a/an:

Answer: Tissue

Q. 999: What is formed when different tissues work together to do a specific job (e.g., the heart)?

Answer: Organ

Q. 1000: A group of organs working together (e.g., the circulatory system) is known as a/an:

Answer: Organ System

Questions 1001-1100

Q. 1001: Which level of organization is made of all the systems working together to make a complete living thing (e.g., a human)?

Answer: Organism

Q. 1002: What is defined as the smallest, most basic unit of life and the building block of all living things?

Answer: Cell

Q. 1003: What is an organism called if it is made of just one single cell?

Answer: Unicellular

Q. 1004: Which of the following is an example of a unicellular organism mentioned in the text?

Answer: Bacteria

Q. 1005: If an organism is made of many cells working together, it is called:

Answer: Multicellular

Q. 1006: According to the text, what would happen to an organism if there were no cells?

Answer: There would be no structure and no function

Q. 1007: What are the two primary types of cells that make up all living things?

Answer: Prokaryotic cells and Eukaryotic cells

Q. 1008: Which type of cell is described as tiny, simple, and behaving like an open, one-room cabin?

Answer: Prokaryotic cell

Q. 1009: Why do prokaryotic cells lack a central "brain room"?

Answer: They do not have a nucleus

Q. 1010: Which type of cell acts like a modern house divided into different rooms with a secure nucleus?

Answer: Eukaryotic cell

Q. 1011: What are the tiny parts inside eukaryotic cells that handle specific chores like making energy?

Answer: Organelles

Q. 1012: Which cell part uses DNA to regulate cell activities and acts as the "main office" or "brain"?

Answer: Nucleus

Q. 1013: What is the specific boundary around the nucleus that allows certain materials to pass in and out?

Answer: Nuclear Membrane

Q. 1014: Which organelle produces energy for the cell and acts as the "power generator" or "powerhouse"?

Answer: Mitochondria

Q. 1015: What is the jelly-like fluid where all the cell parts float, acting as the cell's environment?

Answer: Cytoplasm

Q. 1016: Which part acts as the assembly line or highway system inside the factory where cell reactions take place?

Answer: Endoplasmic Reticulum

Q. 1017: Which cell parts act as workers or machines producing proteins, the factory's primary product?

Answer: Ribosomes

Q. 1018: Which organelle belongs to the packaging and shipping department because it packs and carries proteins?

Answer: Golgi Bodies

Q. 1019: Which units act as waste management or recycling units by recycling worn-out cell products?

Answer: Lysosomes

Q. 1020: What is the outer structure of the cell that acts as the boundary or wall of the factory?

Answer: Cell Membrane

Q. 1021: What is the strong, rigid outer covering found in plant cells that provides shape, support, and protection?

Answer: Cell Wall

Q. 1022: Plant cell walls are mainly composed of which material?

Answer: Cellulose

Q. 1023: In which of the following types of cells is the cell wall completely absent?

Answer: Animal cells

Q. 1024: Who discovered the cell for the very first time in 1665 by looking at a slice of cork?

Answer: Robert Hooke

Q. 1025: Who was the first scientist to observe living cells (like bacteria and protozoa) under a microscope?

Answer: Antoine van Leeuwenhoek

Q. 1026: What is the jelly-like fluid called that is found specifically inside the nucleus?

Answer: Nucleoplasm

Q. 1027: What is the process by which plants prepare their own food using sunlight?

Answer: Photosynthesis

Q. 1028: Photosynthesis mainly takes place in which part of the plant?

Answer: Leaves

Q. 1029: The green pigment responsible for absorbing sunlight is:

Answer: Chlorophyll

Q. 1030: Plants absorb carbon dioxide through:

Answer: Stomata

Q. 1031: Plants absorb water from the soil through:

Answer: Roots

Q. 1032: During photosynthesis, plants release:

Answer: Oxygen

Q. 1033: The primary source of energy for photosynthesis is:

Answer: Sunlight

Q. 1034: Which gas is essential for photosynthesis?

Answer: Carbon Dioxide

Q. 1035: Which gas is produced as a by-product of photosynthesis?

Answer: Oxygen

Q. 1036: The food produced during photosynthesis is mainly:

Answer: Glucose

Q. 1037: Cellular respiration is the process by which cells:

Answer: Release energy from food

Q. 1038: Respiration occurs in:

Answer: Mitochondria

Q. 1039: The main purpose of respiration is to produce:

Answer: Energy (ATP)

Q. 1040: Which gas is required for aerobic respiration?

Answer: Oxygen

Q. 1041: Which gas is released during respiration?

Answer: Carbon Dioxide

Q. 1042: The powerhouse of the cell is:

Answer: Mitochondria

Q. 1043: ATP stands for:

Answer: Adenosine Triphosphate

Q. 1044: The process of cell division producing two identical daughter cells is:

Answer: Mitosis

Q. 1045: Mitosis is mainly responsible for:

Answer: Growth and repair

Q. 1046: Meiosis produces:

Answer: Four genetically different cells

Q. 1047: Meiosis occurs in:

Answer: Reproductive cells

Q. 1048: Human body cells contain:

Answer: 46 chromosomes

Q. 1049: Human gametes contain:

Answer: 23 chromosomes

Q. 1050: DNA stands for:

Answer: Deoxyribonucleic Acid

Q. 1051: DNA carries:

Answer: Genetic information

Q. 1052: Genes are located on:

Answer: Chromosomes

Q. 1053: The functional unit of heredity is:

Answer: Gene

Q. 1054: The scientist known as the Father of Genetics is:

Answer: Gregor Mendel

Q. 1055: Mendel performed his experiments on:

Answer: Pea plants

Q. 1056: The passing of traits from parents to offspring is called:

Answer: Heredity

Q. 1057: Variation refers to:

Answer: Differences among individuals

Q. 1058: Blood is classified as a:

Answer: Connective tissue

Q. 1059: The liquid portion of blood is:

Answer: Plasma

Q. 1060: Red blood cells contain:

Answer: Hemoglobin

Q. 1061: White blood cells help:

Answer: Fight infections

Q. 1062: Platelets help in:

Answer: Blood clotting

Q. 1063: The normal blood group system is:

Answer: ABO system

Q. 1064: The universal donor blood group is:

Answer: O Negative

Q. 1065: The universal recipient blood group is:

Answer: AB Positive

Q. 1066: The human heart has:

Answer: Four chambers

Q. 1067: The largest artery in the human body is:

Answer: Aorta

Q. 1068: The vein carrying oxygenated blood from the lungs is:

Answer: Pulmonary vein

Q. 1069: The artery carrying deoxygenated blood to the lungs is:

Answer: Pulmonary artery

Q. 1070: The normal resting heart rate of an adult is approximately:

Answer: 72 beats per minute

Q. 1071: What is the process called when a dormant seed absorbs water, activates energy, and sprouts?

Answer: Germination

Q. 1072: What type of reproduction involves cloning through roots, stems, or leaves without flowers and seeds?

Answer: Asexual

Q. 1073: Strawberries and mint propagate through horizontal stems creeping along the ground called:

Answer: Runners / Stolons

Q. 1074: Which underground storage stems grow "eyes" or buds that can develop into brand new plants?

Answer: Tubers

Q. 1075: Onions and garlic are examples of which type of vegetative propagation structure?

Answer: Bulbs

Q. 1076: Underground horizontal stems that send up new shoots, such as ginger and turmeric, are called:

Answer: Rhizomes

Q. 1077: In flowering plants, which organ serves as the primary reproductive structure?

Answer: Flower

Q. 1078: What is the collective term for the male reproductive part of a flower?

Answer: Stamen

Q. 1079: Which specific structure within the stamen is the pollen-producing sac at the top?

Answer: Anther

Q. 1080: What is the slender, hair-like stalk that supports and holds up the anther?

Answer: Filament

Q. 1081: What is the collective term for the female reproductive part located in the center of the flower?

Answer: Pistil or Carpel

Q. 1082: Which part of the pistil features a sticky top surface designed to catch pollen grains?

Answer: Stigma

Q. 1083: What is the long, tube-like neck connecting the stigma to the ovary?

Answer: Style

Q. 1084: Which swollen base structure houses the ovules or egg cells?

Answer: Ovary

Q. 1085: After successful fertilization, the ovule becomes a seed, while the entire ovary turns into a:

Answer: Fruit

Q. 1086: Brightly colored leaves designed to attract pollinators like bees and birds are called:

Answer: Petals (Corolla)

Q. 1087: What are the green, leaf-like structures at the base that protect a flower bud before it opens?

Answer: Sepals (Calyx)

Q. 1088: The transfer of pollen grains from the male anther to the female stigma is called:

Answer: Pollination

Q. 1089: What type of pollination occurs when pollen moves within the same flower or between flowers on the same plant?

Answer: Self-pollination

Q. 1090: When pollen is carried from one plant to a completely different plant of the same species, it is called:

Answer: Cross-pollination

Q. 1091: What structure grows down through the style into the ovary after a pollen grain lands on the stigma?

Answer: Pollen tube

Q. 1092: The biological fusion of a male sperm cell with a female egg cell creates a:

Answer: Zygote

Q. 1093: Flowers that contain both male stamens and female pistils within the exact same flower are described as:

Answer: Bisexual / Perfect

Q. 1094: In which type of sex expression are male and female flowers separate but grown on the exact same plant?

Answer: Monoecious

Q. 1095: Which term describes plants like the date palm and papaya, where an individual plant has only male or only female flowers?

Answer: Dioecious

Q. 1096: Who is widely recognized as the Father of Agriculture and the Father of the Green Revolution?

Answer: Norman Ernest Borlaug

Q. 1097: What is the branch of agriculture that deals specifically with beekeeping?

Answer: Apiculture

Q. 1098: A specialized place where beehives are kept and managed is called an:

Answer: Apiary

Q. 1099: Which branch of agriculture focuses on the cultivation of trees and shrubs?

Answer: Arboriculture

Q. 1100: The targeted cultivation of flowering plants is known as:

Answer: Floriculture

Questions 1101-1200

Q. 1101: Horticulture involves the cultivation of which group of plants?

Answer: Flowers, fruits, and ornamental plants

Q. 1102: What agricultural practice involves the rearing of silkworms?

Answer: Sericulture

Q. 1103: What is the primary purpose of breeding earthworms in vermiculture?

Answer: Making fertilizers for farming

Q. 1104: The study, cultivation, and harvesting of grapes and vines is called:

Answer: Viticulture

Q. 1105: What is the practice of growing more than one vegetable on a massive scale for industrial purposes called?

Answer: Truck Farming

Q. 1106: What does the literal Arabic word "Rabi" mean?

Answer: Spring

Q. 1107: What is the standard sowing period for Rabi crops in Pakistan?

Answer: October to December

Q. 1108: During which months are the winter-sown Rabi crops harvested in Pakistan?

Answer: April to May

Q. 1109: Which crop is considered the most vital Rabi food grain and a major crop of Pakistan?

Answer: Wheat

Q. 1110: Gram (chickpeas), barley, and mustard are categorized under which agricultural season?

Answer: Rabi Season

Q. 1111: What does the literal Arabic word "Kharif" mean?

Answer: Winter

Q. 1112: The summer/monsoon Kharif crops are sown during which period?

Answer: May to July

Q. 1113: What is the harvesting timeline for Kharif crops in Pakistan?

Answer: September to November

Q. 1114: Which of the following environmental conditions is highly required for successful Kharif crop growth?

Answer: High temperatures and high humidity

Q. 1115: Which crop serves as the primary Kharif staple grain in Pakistan?

Answer: Rice

Q. 1116: Cotton, maize, sugarcane, soybeans, and groundnuts are classified as which type of crops?

Answer: Kharif Crops

Q. 1117: Which of the following is not a basic condition to belong to Kingdom Animalia?

Answer: Presence of a cell wall

Q. 1118: Animal cells are flexible and capable of developing nerves and muscles because they lack:

Answer: A cell wall

Q. 1119: Organisms that cannot produce their own food and must consume other organic matter are called:

Answer: Heterotrophic

Q. 1120: Which of the following is the largest bird in the world?

Answer: Ostrich

Q. 1121: Which unique characteristic belongs to the hummingbird, the smallest bird?

Answer: It can fly backward

Q. 1122: Which bird is specifically known for having weak eyesight?

Answer: Kiwi

Q. 1123: Where is the blind dolphin fish primarily found?

Answer: Indus River

Q. 1124: What is the length of the Blue Whale (the largest mammal) mentioned as found in Sri Lanka?

Answer: 30 meters

Q. 1125: To which class of animals does the Platypus belong?

Answer: Mammals

Q. 1126: Birds that are mainly found in South America are a notable group. In general, birds are classified as:

Answer: Warm-blooded

Q. 1127: Animals that cannot control their internal body temperature and depend on their surroundings are:

Answer: Cold-blooded

Q. 1128: Why do cold-blooded animals require significantly less food than warm-blooded animals?

Answer: They do not spend energy generating heat

Q. 1129: Which of the following pairs contains only warm-blooded animals?

Answer: Birds and Mammals

Q. 1130: Which animal is highly known for being illegally traded?

Answer: Pangolin

Q. 1131: The Houbara bustard is a famous migratory bird that migrates to Pakistan during which season?

Answer: Winter

Q. 1132: Animals that do not possess a backbone or an internal bony skeleton are known as:

Answer: Invertebrates

Q. 1133: Which group of invertebrates is characterized by jointed legs and a hard outer armor called an exoskeleton?

Answer: Arthropods

Q. 1134: Snails, clams, octopuses, and squids belong to which invertebrate group?

Answer: Mollusks

Q. 1135: Vertebrates possess an internal skeleton made of:

Answer: Bone or cartilage

Q. 1136: Into how many main groups are vertebrates divided?

Answer: 5

Q. 1137: Animals like cows and goats that eat only plants and have flat grinding teeth are called:

Answer: Herbivores

Q. 1138: Which of the following features is characteristic of a carnivore like a jaguar?

Answer: Sharp tearing teeth and a highly acidic stomach

Q. 1139: Humans and bears eat both plants and meat, placing them in which category?

Answer: Omnivores

Q. 1140: What is the primary ecological role of detritivores and scavengers like earthworms and vultures?

Answer: Recycling nutrients back into the soil

Q. 1141: Which organ system regulates slower, long-term body changes like metabolism and growth through hormones?

Answer: Endocrine System

Q. 1142: The lymphatic and immune system includes which of the following components to defend the body?

Answer: Lymph nodes, spleen, and white blood cells

Q. 1143: Which system is responsible for exchanging oxygen and carbon dioxide gases?

Answer: Respiratory System

Q. 1144: The urinary or excretory system primarily filters the blood and eliminates fluid waste using the:

Answer: Kidneys and bladder

Q. 1145: What is the flexible, rubbery tissue that cushions the ends of bones at joints to prevent friction?

Answer: Cartilage

Q. 1146: A tough band of tissue that connects bone to bone is known as a:

Answer: Ligament

Q. 1147: A structure that connects muscle to bone is called a:

Answer: Tendon

Q. 1148: How many bones are present in an adult human skeleton compared to a newborn baby?

Answer: 206 in adults, 300 in babies

Q. 1149: What is the total number of ribs found in the human rib cage?

Answer: 24

Q. 1150: How many collective bones are found in the middle ears of a human?

Answer: 6

Q. 1151: What is the number of bones that make up the human face?

Answer: 14

Q. 1152: The total number of bones in the human skull (including the cranium and facial bones) is:

Answer: 22

Q. 1153: Which is the smallest bone in the human body?

Answer: Stapes

Q. 1154: What is the largest, heaviest, and strongest bone in the human body?

Answer: Femur

Q. 1155: Wisdom teeth typically emerge within which age range?

Answer: 17–25 years

Q. 1156: What is the hardest substance found in the human body?

Answer: Tooth Enamel

Q. 1157: Which types of teeth are highly developed and prominent in predatory animals like tigers and lions?

Answer: Canines

Q. 1158: Rats have continuously growing front teeth specialized for gnawing, which are called:

Answer: Incisors

Q. 1159: The soft tissue inside bone cavities where red marrow creates blood cells and yellow marrow stores fat is:

Answer: Bone Marrow

Q. 1160: What is the biological term for the formation and development of new blood cells within the red bone marrow?

Answer: Hematopoiesis

Q. 1161: The natural process by which cartilage or soft tissue turns into hard, solid bone is known as:

Answer: Ossification

Q. 1162: Which bone is the largest, strongest, and only movable bone in the human skull?

Answer: Mandible (Jawbone)

Q. 1163: Which bone is commonly referred to as the collarbone and is the most frequently fractured bone?

Answer: Clavicle

Q. 1164: The breastbone, located in the center of the chest connecting directly to the ribs, is scientifically called the:

Answer: Sternum

Q. 1165: The large triangular bone connecting the upper arm to the collarbone is the shoulder blade, also known as the:

Answer: Scapula

Q. 1166: The vertebral column (backbone) is composed of ____ individual vertebrae in children, which fuse to ____ in adults.

Answer: 33, 26

Q. 1167: The kneecap is a circular-triangular bone that protects the knee joint, scientifically named the:

Answer: Patella

Q. 1168: Which bone is the larger and stronger of the two lower leg bones and bears the body's weight?

Answer: Tibia

Q. 1169: When food is chewed in the mouth, saliva mixes with it to turn it into a paste-like ball called a:

Answer: Bolus

Q. 1170: The wave-like contraction and expansion movement that pushes food down the esophagus is known as:

Answer: Peristaltic movement

Q. 1171: Which acid is present in the stomach that makes the food acidic and helps break it down?

Answer: HCl

Q. 1172: Bile juice, which is produced by the liver, is temporarily stored in which organ?

Answer: Gallbladder

Q. 1173: The pancreas produces which hormones to regulate and control blood glucose levels?

Answer: Insulin & Glucagon

Q. 1174: Before entering the small intestine for further digestion, the highly acidic food from the stomach must be converted into:

Answer: Alkaline

Q. 1175: What is the approximate length of the human small intestine?

Answer: 6.5 meters

Q. 1176: In which part of the digestive track are all essential nutrients absorbed into the bloodstream?

Answer: Small Intestine

Q. 1177: What is the approximate length of the human large intestine?

Answer: 1.5 meters

Q. 1178: The primary function of absorbing excess water and essential salts from undigested food belongs to the:

Answer: Large Intestine

Q. 1179: Before being excreted from the body, semi-solid waste (stool) is temporarily stored in the:

Answer: Rectum

Q. 1180: Which enzyme present in saliva helps initiate the chemical digestion of starch and carbohydrates?

Answer: Salivary Amylase

Q. 1181: Although bile juice contains no digestive enzymes, its main chemical role is to emulsify:

Answer: Fats

Q. 1182: Which enzyme is secreted by the stomach to help digest proteins?

Answer: Pepsin

Q. 1183: Which pancreatic enzyme digests fats, which are known to have the highest calorific value?

Answer: Lipase

Q. 1184: When we eat meat, the protein content is ultimately broken down and converted into:

Answer: Amino Acids

Q. 1185: Which nutrient provides immediate and ready energy for athletes?

Answer: Carbohydrates

Q. 1186: What is the correct chemical formula for Glucose?

Answer: $C_6H_{12}O_6$

Q. 1187: The small intestine walls have tiny, finger-like structures to maximize nutrient absorption called:

Answer: Villi

Q. 1188: The process in which cells fully break down food to release a large amount of energy (36 ATP) in the presence of oxygen is called:

Answer: Aerobic respiration

Q. 1189: During heavy exercise when oxygen is scarce, muscles undergo a process that produces only how many ATP?

Answer: 2 ATP

Q. 1190: Anaerobic respiration during intense physical work leads to a partial breakdown of food, causing muscle:

Answer: Fatigue or cramps

Q. 1191: Which structure acts as a common passage for both food and air before they diverge into their respective pathways?

Answer: Pharynx

Q. 1192: Which organ is commonly referred to as the "voice box" because it contains the vocal cords?

Answer: Larynx

Q. 1193: The protective flap-like structure that prevents food from entering the windpipe during swallowing is the:

Answer: Epiglottis

Q. 1194: The trachea (windpipe) stays open and is prevented from collapsing due to rings made of cartilage shaped like the letter:

Answer: C

Q. 1195: The tiny air sacs at the end of bronchioles where the actual exchange of oxygen and carbon dioxide takes place are called:

Answer: Alveoli

Q. 1196: Which major muscle located below the lungs moves downward during inhalation to expand the chest cavity?

Answer: Diaphragm

Q. 1197: The protective double-layered membrane enclosing the lungs is called the:

Answer: Pleura

Q. 1198: A frog (*Rana tigrina*) primarily breathes on land using its:

Answer: Lungs

Q. 1199: Fish extract dissolved oxygen from water using specialized respiratory organs called:

Answer: Gills

Q. 1200: A cockroach breathes through a network of air tubes known as the:

Answer: Trachea

Questions 1201-1300

Q. 1201: Earthworms perform gas exchange directly through their moist:

Answer: Skin

Q. 1202: A prolonged state of animal dormancy and metabolic depression during the winter season is known as:

Answer: Hibernation

Q. 1203: A state of animal dormancy similar to hibernation, but taken during hot summer conditions, is called:

Answer: Aestivation

Q. 1204: How many chambers does the human heart have?

Answer: 4

Q. 1205: What are the names of the two upper chambers of the human heart?

Answer: Atria (Atriums)

Q. 1206: Which chamber of the heart is the most powerful and muscular because it pumps blood to the whole body?

Answer: Left Ventricle

Q. 1207: What structures in the heart ensure that blood flows in only one direction and prevents backflow?

Answer: Valves

Q. 1208: Through which valve does the left ventricle pump blood into the main large artery (Aorta)?

Answer: Aortic Valve

Q. 1209: What percentage of the blood volume is made up of Plasma?

Answer: 55%

Q. 1210: What is the average lifespan of a Red Blood Cell (Erythrocyte)?

Answer: 120 days

Q. 1211: Where are red blood cells, white blood cells, and platelets primarily produced?

Answer: Bone Marrow

Q. 1212: Old or damaged Red Blood Cells are primarily broken down and destroyed in which organ?

Answer: Spleen

Q. 1213: Why are Red Blood Cells (RBCs) red in color?

Answer: Due to hemoglobin protein

Q. 1214: Which blood component is specifically responsible for protecting the body against diseases and infections?

Answer: White Blood Cells

Q. 1215: What is the primary function of Platelets (Thrombocytes) in the human body?

Answer: Blood clotting

Q. 1216: Which blood vessels carry low-oxygen, high-CO₂ blood back into the heart?

Answer: Veins

Q. 1217: Which blood vessels carry high-oxygen, low-CO₂ blood away from the heart?

Answer: Arteries

Q. 1218: What are the smallest blood vessels that serve as the joining point between arteries and veins?

Answer: Capillaries

Q. 1219: Which unique veins are the only ones that carry oxygenated blood from the lungs to the heart?

Answer: Pulmonary veins

Q. 1220: Which unique artery is the only one that carries deoxygenated (oxygen-poor) blood?

Answer: Pulmonary Artery

Q. 1221: What is the normal approximate size of a human heart?

Answer: A human fist

Q. 1222: What is the average weight of a healthy human heart?

Answer: 300 grams

Q. 1223: What is the shape of the human heart?

Answer: Conical

Q. 1224: Anatomically, the human heart starts at the level of the 2nd rib and ends at the:

Answer: 6th rib

Q. 1225: What is the name of the thick, heavy muscular layer of the heart wall?

Answer: Myocardium

Q. 1226: What is the average volume of blood circulating in a normal human body?

Answer: 5 to 6 Liters

Q. 1227: Water makes up approximately what percentage of human blood plasma?

Answer: 92%

Q. 1228: How many chambers are present in a frog's heart (*Rana tigrina*)?

Answer: 3

Q. 1229: What is considered a normal resting blood pressure measurement for a healthy adult?

Answer: 120/80

Q. 1230: What is the normal pH value of human blood?

Answer: 7.4

Q. 1231: Which organ holds the historic record of being the very first successfully transplanted internal organ?

Answer: Kidney

Q. 1232: What is the average normal pulse rate (heart rate) of a human per minute?

Answer: 72 times

Q. 1233: Which type of blood vessel features a wall that is only a single cell in thickness?

Answer: Capillary

Q. 1234: Blood serum is defined as blood plasma minus its:

Answer: Clotting proteins

Q. 1235: On average, a human being consumes how many liters of pure oxygen per day?

Answer: 550 liters

Q. 1236: Which medical device is used by doctors to measure arterial blood pressure?

Answer: Sphygmomanometer

Q. 1237: According to the text, how much blood does the heart pump every second?

Answer: 6.2 liters

Q. 1238: The human nervous system is anatomically divided into how many main divisions?

Answer: Two

Q. 1239: Which components strictly make up the Central Nervous System (CNS)?

Answer: Brain and Spinal cord

Q. 1240: What is the primary role of the Central Nervous System (CNS)?

Answer: To process incoming sensory information and dictate responses

Q. 1241: Which division consists of a complex network of nerve cells spreading throughout the entire body to relay messages to the limbs and organs?

Answer: Peripheral Nervous System (PNS)

Q. 1242: What is classified as the fundamental structural and functional unit of the entire nervous system?

Answer: Neuron (Nerve cell)

Q. 1243: Which of the following is recognized as the largest cell in the human body?

Answer: Neuron

Q. 1244: Messages are transmitted along neurons in the form of specialized electrochemical waves called what?

Answer: Nerve impulses

Q. 1245: Which part of the neuron consists of fine, branch-like projections responsible for receiving messages from other cells?

Answer: Dendrites

Q. 1246: What is the single, long projection extending from the neuron's cell body that conducts messages away toward the next cell or muscle?

Answer: Axon

Q. 1247: What is the structurally largest region of the entire human brain?

Answer: Forebrain

Q. 1248: Which single part is the largest part of the entire human brain and controls higher-order cognitive functions like thinking, memory, hearing, sight, and emotions?

Answer: Cerebrum

Q. 1249: Which structure located deep inside the cerebrum is primarily responsible for controlling and filtering sensory functions?

Answer: Thalamus

Q. 1250: Which area serves as the primary control center for regulating body temperature, hunger, and thirst?

Answer: Hypothalamus

Q. 1251: What is the primary function of the Midbrain?

Answer: Serving as a crucial relay station connecting the forebrain with the hindbrain

Q. 1252: Which part of the hindbrain lies tucked directly under the back section of the cerebrum to coordinate body balance, posture, and motor movement?

Answer: Cerebellum

Q. 1253: Which structure located above the medulla plays a critical role in controlling sleep cycles, equilibrium, and the sense of taste?

Answer: Pons

Q. 1254: Which lowest section of the hindbrain directly connects the brain to the spinal cord and regulates essential life-support mechanisms like heartbeat, breathing, and digestion?

Answer: Medulla Oblongata

Q. 1255: Which part of the brain remains fully active and works continuously even when you are asleep to keep vital organs functioning automatically?

Answer: Medulla Oblongata

Q. 1256: Despite its size, the human brain consumes what percentage of the body's total oxygen supply and circulating blood?

Answer: 20%

Q. 1257: The brain relies strictly on which substance as its primary source of metabolic fuel and energy to power cellular activities?

Answer: Glucose

Q. 1258: An adult human brain accounts for approximately what percentage of an individual's total body weight?

Answer: 2%

Q. 1259: The physical tissue of the human brain is composed of what percentage of water?

Answer: 73%

Q. 1260: The autonomic nervous system regulates involuntary visceral functions throughout the body but does NOT innervate which of the following?

Answer: Skeletal muscles

Q. 1261: A defect or damage affecting the Abducens nerve (Cranial Nerve VI) directly results in impairment of what function?

Answer: Eye movement

Q. 1262: What is the primary biological objective of the human excretory system in maintaining internal chemical and water balance?

Answer: Homeostasis

Q. 1263: Where are the bean-shaped kidneys anatomically located in the human body?

Answer: On either side of the spine just below the rib cage

Q. 1264: What is classified as the basic structural and functional unit of the human kidney?

Answer: Nephron

Q. 1265: Approximately how many nephrons are present in each human kidney?

Answer: 1 million

Q. 1266: Which specific part of the nephron consists of a network of capillaries that filters the blood under high pressure?

Answer: Glomerulus

Q. 1267: What is the primary function of the Renal Tubule in a nephron?

Answer: To reabsorb useful substances like glucose back into the blood

Q. 1268: Which structures are the two thin, muscular tubes that transport urine downward from the kidneys to the urinary bladder using peristaltic movements?

Answer: Ureters

Q. 1269: Which organ acts as a hollow, flexible muscular sac located in the pelvic cavity to temporarily store urine?

Answer: Urinary Bladder

Q. 1270: What is the final tube through which urine is discharged out of the body from the urinary bladder?

Answer: Urethra

Q. 1271: During ultrafiltration, which components are kept back in the bloodstream and NOT filtered into the nephron?

Answer: Large blood cells and proteins

Q. 1272: What percentage of the filtered fluid/water is selectively reabsorbed back into the blood capillaries along the renal tubule?

Answer: 99%

Q. 1273: Where is urea, the primary nitrogenous waste product in humans, originally produced or formed in the body?

Answer: Liver

Q. 1274: Urea is formed in the liver from the metabolic breakdown of which substances?

Answer: Excess amino acids (proteins)

Q. 1275: Humans are classified as "ureotelic" because their main nitrogenous waste product is which of the following?

Answer: Urea

Q. 1276: Which types of animals excrete Uric Acid as their primary nitrogenous waste?

Answer: Birds and reptiles

Q. 1277: What do fish primarily excrete as their main nitrogenous waste product?

Answer: Ammonia

Q. 1278: Approximately how many liters of fluid do human kidneys filter daily?

Answer: 180 liters

Q. 1279: Out of the total daily filtered fluid, how much is actually excreted from the body in the form of urine?

Answer: About 1 to 2 liters

Q. 1280: What is the typical water percentage composition found in normal, healthy human urine?

Answer: 95%

Q. 1281: Besides water, what percentage of normal human urine is typically composed of urea?

Answer: 2%

Q. 1282: The presence of which abnormal components in urine usually indicates a medical condition like diabetes or kidney damage?

Answer: Glucose or Protein

Q. 1283: Which hormone, released by the pituitary gland, directly regulates the amount of water reabsorbed by the kidneys?

Answer: Anti-Diuretic Hormone (ADH)

Q. 1284: When a person is dehydrated, what happens to the ADH levels and the resulting urine concentration?

Answer: ADH rises and urine becomes more concentrated

Q. 1285: What is the artificial process of cleaning and filtering the blood called when a patient experiences kidney failure?

Answer: Dialysis

Q. 1286: Kidney stones are hard deposits made of minerals and acid salts that are most commonly composed of which chemical compound?

Answer: Calcium oxalate

Q. 1287: What is the average length or size range of a normal adult human kidney?

Answer: 10-13 cm

Q. 1288: What is the scientific study of kidneys, their functions, and related diseases called?

Answer: Nephrology

Q. 1289: Excess water and toxic wastes leave the kidney structure to travel to the bladder via which specific pathway?

Answer: Ureter

Q. 1290: The endocrine system consists of what type of glands that release hormones directly into the bloodstream?

Answer: Ductless glands

Q. 1291: Which type of hormones are chemically classified as water-soluble?

Answer: Protein hormones

Q. 1292: Testosterone, estrogen, and progesterone are fat-soluble hormones derived from which substance?

Answer: Cholesterol

Q. 1293: Glands that possess ducts and release their secretions outside the blood (like sweat, saliva, or tears) are called what?

Answer: Exocrine glands

Q. 1294: Which of the following is classified as a mixed or heterocrine gland because it performs both endocrine and exocrine jobs?

Answer: Pancreas

Q. 1295: Which gland is known as the "Master Gland" and is located at the base of the brain?

Answer: Pituitary gland

Q. 1296: Which hormone secreted by the pituitary gland is primarily responsible for tracking and regulating physical growth?

Answer: Growth Hormone

Q. 1297: Which hormone is responsible for causing birth contractions and triggering milk release during lactation?

Answer: Oxytocin

Q. 1298: What is the primary milk-producing hormone in the human body?

Answer: Prolactin

Q. 1299: Which butterfly-shaped gland located in the neck requires Iodine to produce its primary metabolic hormone?

Answer: Thyroid Gland

Q. 1300: An enlargement of the thyroid gland due to a structural deficiency of iodine is known as what disease?

Answer: Goiter

Questions 1301-1332

Q. 1301: What is the exocrine function of the reproductive gonads (testes and ovaries)?

Answer: Producing sperm and eggs via ducts

Q. 1302: Structurally, the milk-producing mammary glands in the breast are modified versions of which exocrine glands?

Answer: Sweat glands

Q. 1303: Which specific type of sweat glands produce a watery sweat used strictly for cooling and thermoregulation?

Answer: Eccrine glands

Q. 1304: Which sweat glands are located in the armpits and groin, producing a thicker sweat responsible for body odor?

Answer: Apocrine glands

Q. 1305: Normal human sweat is composed of 99% water, salts (Sodium Chloride), and small traces of which metabolic cell wastes?

Answer: Urea, Uric Acid, and Ammonia

Q. 1306: By accounting for about 16% of total body weight, what is the largest organ of the human body by surface area and weight?

Answer: Skin

Q. 1307: Which outer, waterproof layer of the skin contains absolutely no blood vessels?

Answer: Epidermis

Q. 1308: Which middle layer of the skin contains blood vessels, nerves, and hair follicles?

Answer: Dermis

Q. 1309: What is the deepest layer of the skin made of fat that serves primarily as insulation?

Answer: Hypodermis/Subcutaneous layer

Q. 1310: What dark pigment is produced by specialized cells in the epidermis to protect the skin from harmful Ultraviolet (UV) radiation?

Answer: Melanin

Q. 1311: Human hair and nails are primarily made of which tough protective structural protein?

Answer: Keratin

Q. 1312: Which tiny muscle attached to each hair follicle contracts during cold or fear to pull the hair upright and create "goosebumps"?

Answer: Arrector Pili

Q. 1313: During body overheating, what physiological process widens the blood vessels in the dermis to release excess heat?

Answer: Vasodilation

Q. 1314: When the body is exposed to cold, dermal blood vessels narrow to retain heat closer to internal organs via which process?

Answer: Vasoconstriction

Q. 1315: The skin uses UV light from the sun to convert cholesterol compounds in the epidermis into which essential nutrient?

Answer: Vitamin D

Q. 1316: Which exocrine gland is specifically responsible for secreting tears?

Answer: Lacrimal gland

Q. 1317: What is the anatomical length of the human small intestine?

Answer: 6.5 meters

Q. 1318: What is the anatomical length of the human large intestine?

Answer: 1.5 meters

Q. 1319: Which organ is classified as the largest lymphatic organ in the human body?

Answer: Spleen

Q. 1320: Which organ is recognized as the overall largest gland in the human body?

Answer: Liver

Q. 1321: Which organ is recognized as the largest endocrine gland in the human body?

Answer: Thyroid gland

Q. 1322: Which gland is classified as the smallest gland in the human body?

Answer: Pineal gland

Q. 1323: Which types of nutrients are needed in large daily amounts (grams) and are the only ones providing direct energy (calories)?

Answer: Macronutrients

Q. 1324: Which macronutrient serves as the body's primary energy fuel and is sourced from wheat, rice, and potatoes?

Answer: Carbohydrates

Q. 1325: Which macronutrient is primarily used for building muscles, repairing tissues, and making enzymes?

Answer: Proteins

Q. 1326: Ghee, butter, and cooking oils serve as food sources for which concentrated energy-storing macronutrient?

Answer: Fats

Q. 1327: Which statement is true regarding micronutrients (Vitamins and Minerals)?

Answer: They provide zero energy but run chemical reactions

Q. 1328: Which of the following is a water-soluble vitamin that must be consumed daily because excess is excreted in urine?

Answer: Vitamin C

Q. 1329: Which vitamins are fat-soluble, stored in the liver/fatty tissues, and can cause toxicity if taken in excessive amounts?

Answer: Vitamins A, D, E, and K

Q. 1330: Which mineral is structurally essential for hemoglobin production and can be sourced from spinach and red meat?

Answer: Iron

Q. 1331: Milk, yogurt, and cheese are rich dietary sources of which mineral essential for bone health?

Answer: Calcium

Q. 1332: Why must most vitamins be strictly obtained through our diet?

Answer: Because the human body cannot synthesize most of them on its own

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