

General Science Mega Quiz for RRB NTPC (Solutions)

S1. Ans.(c)

Sol. The halogens darken in colour as the group is descended: fluorine is a very pale yellow gas, chlorine is greenish-yellow, and bromine is a reddish-brown volatile liquid. Iodine conforms to the prevailing trend, being a shiny black crystalline solid that melts at 114 °C and boils at 183 °C to form a violet gas.

S2. Ans.(b)

Sol. Galileo made his first telescope in 1609. Samuel Morse independently developed and patented a recording electric telegraph in 1837. Alexander Graham Bell was awarded the first U.S. patent for the invention of the telephone in 1876. Teletype machines from the AP, UPI and Reuters, were invented in 1924, and phased out in the 1970s.

S3. Ans.(d)

Sol. Copper dioxide is not a Greenhouse Gas.

S4. Ans.(c)

Sol. A pH of 7 is neutral. A pH less than 7 is acidic. A pH greater than 7 is basic.

S5. Ans.(d)

Sol. Carrots are rich in beta-carotene, which is converted to vitamin A in the body. Except Carrot all mentioned are rich source of Calcium.

S6. Ans.(a)

Sol. Geotropism is the growth of the parts of plants in response to the force of gravity. The upward growth of plant shoots is an instance of negative geotropism ; the downward growth of roots is positive geotropism.

S7. Ans.(c)

Sol. The word "dynamo" was coined in 1831 by Michael Faraday, who utilized his invention toward making many discoveries in electricity (Faraday discovered electrical induction) and magnetism.

S8. Ans.(b)

Sol. Sound waves in air (and any fluid medium) are longitudinal waves because particles of the medium through which the sound is transported vibrate parallel to the direction that the sound wave moves.

12 Month Subscription



RAILWAYS

Useful for NTPC | Group D | ALP

TEST PACK

S9. Ans.(a)

Sol. In 1928 Alexander Fleming (1881–1955) discovered penicillin, made from the *Penicillium notatum* mold.

S10. Ans.(a)

Sol. Calcium stones are the most common type of kidney stones. They are usually made of calcium and oxalate (a natural chemical found in most foods), but are sometimes made of calcium and phosphate. Uric acid stones form when your urine is often too acidic.

S11. Ans.(b)

Sol.

Ichthyology – Study of fish

Entomology – Scientific study of insects

Parasitology – Study of parasitic organisms

Malacology – Study of molluscs and its shells

S12. Ans.(a)

Sol. Bionics - Study of properties and method of biological systems found in nature and use of this knowledge in mechanical world.

Bionomics – comprehensive study of an organism and its relation to its environment.

Bionomy – Study of laws of life

Biometry – Statistical study of biological problem.

S13. Ans.(a)

Sol.

- The **positron** has a positive electric charge (+ $1e$) and has the same mass and a fractional spin of $\frac{1}{2}$ as an electron.
- **Quarks** combine to form composite particles called hadrons, the most stable of which are protons and neutrons and are the components of atomic nuclei. They have fractional charge of $+2/3e$ or $-1/3e$.
- **Neutrinos** are sub-atomic particles produced by the decay of radioactive elements and are elementary particles that lack an electric charge and a very small mass, which might even be zero.
- **Phonon**, in condensed - ;matter physics, a unit of vibrational energy that arises from oscillating atoms within a crystal. A phonon is a definite discrete unit or quantum of vibrational mechanical energy, just as a photon is a quantum of electromagnetic or light energy. Phonon has integral spin like photon.

S14. Ans.(c)

Sol. Ultra high frequency (UHF) is the ITU designation for radio frequencies in the range between 300 MHz and 3 GHz. Owing to its high frequency, an ultra – high frequency (UHF) wave can neither travel along the trajectory of the ground nor get reflected by the ionosphere. The signals having UHF are propagated normally through the line of sight communication which is actually space wave propagation. The radio waves having high frequencies are basically called as space waves.

S15. Ans.(b)

Sol. Wavelength means the distance measured in the direction of a wave from any given point to the next point in the same phase, as from crest to crest. The distance between two successive crests or two successive troughs is the wavelength of a transverse wave.

S16. Ans.(b)

Sol. Crystallography is the science that examines crystals which can be found everywhere in nature, from salt to snowflakes to gemstones. Crystallographers use the properties of the inner structure of crystals to determine the arrangement of atoms and generate knowledge which is used by chemist, physicists and other.

Crystallographers use X-ray, neutron, and electron diffraction techniques to identify the characteristics of solid materials.

S17. Ans.(b)

Sol. Radar is an object – detection system which uses radio waves to determine the range, angle or velocity of objects. It is used to detect the location of aircraft, ships, spacecraft, motor vehicle etc.

S18. Ans.(d)

Sol. The property of element due to which it forms covalent bonds with other atoms of same element to form chain of atoms is called catenation. For example, carbon atoms can combine to each other to form long chains, branched chains and closed rings. Carbon shows the property of catenation to maximum extent.

S19. Ans.(b)

Sol. Photosynthesis is the process by which plants, some bacteria and some protists use the energy from sunlight to produce glucose from carbon dioxide and water. This glucose can be converted into pyruvate which releases adenosine triphosphate (ATP) by cellular respiration

S20. Ans.(a)

Sol. Bariatric surgery is an operation that helps you lose weight by making changes to your digestive system

S21. Ans.(c)

Sol. Zoology is a branch of biology. It deals with the study of both living and extinct animals including their structure, embryology, evolution, classification, habits, and distribution. Aristotle is known as 'Father of Zoology'.

S22. Ans.(c)

Sol.

Apiculture	– Rearing bees
Horticulture	– Study of fruit and flower producing plants
Sericulture	– Rearing silk worm
Floriculture	– Study of flowers for decoration work

6 Months Subscription

RRB NTPC

KA MAHA PACK

**Test Series, Live Classes,
Video Course, eBooks**

Bilingual

S23. Ans.(c)

Sol. An atom is composed of two regions: the nucleus, which is in the center of the atom and contains protons and neutrons, and the outer region of the atom, which holds its electrons in orbit around the nucleus.

S24. Ans.(b)

Sol. Neutron is a neutral particle which has no electrical charge. It was discovered by Chadwick in 1932. He discovered that when Beryllium (Be) or other atoms are bombarded with high speed particles, then electrically neutral particles emerge from these atoms and such neutral particles are known as neutrons.

S25. Ans.(b)

Sol. An alpha particle is a fast moving particle containing two protons and two neutrons (a helium nucleus). Its mass is equal to that of helium atom's nucleus. Alpha particles carry a charge of +2 and strongly interact with matter. Produced during alpha decay, alpha particles can travel only a few inches through the air and can be easily stopped with a sheet of paper.

S26. Ans.(c)

Sol. The Nucleus of Helium has two protons and two neutrons.

S27. Ans.(c)

Sol. The layer of the atmosphere that reflects radio waves is the ionosphere. That is because there are gas particles in the ionosphere that are ionized, or that carry an electrical charge. The ionosphere is a layer which includes the thermosphere and part of the mesosphere and exosphere.

S28. Ans.(a)

Sol. Cosmic rays are not the part of electromagnetic spectrum. They are immensely high-energy charged particles, travelling through space at a speed approaching that of light. They originated either from the sun or outside of our solar system.

S29. Ans.(d)

Sol. the electromagnetic spectrum consists of all the different wavelength of electromagnetic radiations such as: Radio waves > Microwave > Visible > Ultraviolet > X-rays > Gamma rays. Thus it is clear that the radio waves are having minimum wavelength.

S30. Ans.(c)

Sol. Alpha rays or Alpha particles (α) are the positively charged particles. Beta particles (β) are highly energetic electrons which are released from inner part (β) of a nucleus. They are negatively charged ($-1e$) and have a negligible mass. Gamma radiation (γ) consist of photons, which travel at the speed of light like all electromagnetic radiations. A ray has no mass or charge. Gamma radiation can travel much faster (speed of light) in the air than alpha and beta.

