

## General Science Mega Quiz for RRB NTPC (Solutions)

**S1. Ans.(d)**

**Sol.** Sound is a sequence of waves of pressure which propagates through compressible media such as air or water. During their propagation, waves can be reflected, refracted, or attenuated by the medium.

**S2. Ans.(b)**

**Sol.** Soap bubbles are large because when soap dissolved in water its surface tension is reduced. The pressure inside a soap bubble is more than atmospheric pressure.

**S3. Ans.(a)**

**Sol.** Because of surface tension, drops and bubbles have a tendency to contract and compress the fluid inside. Bubble will compress the air inside. Hence inside pressure is greater than the outside one.

**S4. Ans.(d)**

**Sol.** The reverse effect of X-ray emission is Photo-electric effect.

**S5. Ans.(b)**

**Sol.** Sour taste of 'Coca Cola' is due to the presence of additive E338. Additive E338 contains phosphoric acid. It is used to acidify foods and beverages.

**S6. Ans.(b)**

**Sol.** Cholera is caused by eating food or drinking water contaminated with a bacterium called *Vibrio cholerae*. Athlete's foot (tinea pedis) is a contagious skin infection caused by the ringworm fungus.

**S7. Ans.(a)**

**Sol.** Interferons (IFNs) are a group of signaling proteins made and released by host cells in response to the presence of pathogens such as viruses, bacteria, parasites or tumour cells such as in cancer.

**S8. Ans.(a)**

**Sol.** The Actinide series contains elements with atomic numbers 89 to 103 and is the sixth group in the periodic table.

**S9. Ans.(a)**

**Sol.** Polytetrafluoroethylene (PTFE) is usually known as Teflon. PTFE is a solid fluorocarbon. Its density is 2.2 g/cm<sup>3</sup> and its melting point is 327°C. This is especially used for making a non-stick surface coating for utensils.



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**S10. Ans.(a)**

**Sol.** compressions are regions where density as well as pressure is high. Rarefactions are the regions of low pressure where particles are spread apart and are represented by the valley, that is, the lower portion of the curve.

**S11. Ans.(b)**

**Sol.** Alzheimer's disease is a degenerative disorder of the brain and one of several conditions that cause dementia, a progressive decline of mental functions resulting in memory loss and confusion.

**S12. Ans.(c)**

**Sol.** Light passes through the front of the eye (cornea) to the lens. The cornea and the lens help to focus the light rays onto the back of the eye (retina).

**S13. Ans.(c)**

**Sol.** Malic acid is the main principal acid present in the ripe banana; citric and oxalic acids are also present.

**S14. Ans.(d)**

**Sol.** Calcium hydroxide is an inorganic compound with the chemical formula  $\text{Ca}(\text{OH})_2$ . It is a colorless crystal or white powder and is produced when quicklime is mixed, or slaked with water. It has many names including hydrated lime, caustic lime, builders' lime, slack lime, cal, or pickling lime.

**S15. Ans.(d)**

**Sol.** Mendeleev was not able to explain the position of hydrogen. It resembles like both the alkali metals and the halogens. Hence, it was placed in IA group VI B group and could not be given a fixed position in Mendeleev's Periodic Table.

**S16. Ans.(c)**

**Sol.** Law of octaves, in chemistry, the generalization made by the English chemist J.A.R. Newlands in 1865 that, if the chemical elements are arranged according to increasing atomic weight, those with similar physical and chemical properties occur after each interval of seven elements.

**S17. Ans.(c)**

**Sol.** The length of small intestine differs in various animals depending on their food that they eat. Herbivores need a longer small intestine to allow cellulose to be digested as taken from green plants. Meat is easier to digest, hence carnivores like tiger have a shorter small intestine.

**S18. Ans.(c)**

**Sol.** Characteristics refers to appearance, behavior and particular function in classification of organisms.

**S19. Ans.(b)**

**Sol.** Hemoglobin or Haemoglobin is the respiratory pigment in human beings.

**S20. Ans.(a)**

**Sol.** Forces responsible for the movement of fluids through xylem are transpiration, cohesion, adhesion, and absorption. Transpiration is the evaporation of water through leaf stomata. It is the major force moving water through plants.

**S21. Ans.(a)**

**Sol.** The main respiratory surface in humans is the alveoli. Alveoli are tiny balloon like structures with very thin walls. They have numerous tiny thin walled blood vessels in direct contact with them. It is within the lungs.

**S22. Ans.(a)**

**Sol.** The skin, the lining of the mouth, the lining of blood vessels, lung alveoli and kidney tubules are all made of epithelial tissue. Epithelial tissue cells are tightly packed and form a continuous sheet.

**S23. Ans.(b)**

**Sol.** Before the object begins falling, it has gravitational potential energy which can be calculated by  $mgh$ , So the initial potential energy will equal the kinetic energy of the object right before it hits the ground. The potential energy has been converted into kinetic energy.

**S24. Ans.(b)**

**Sol.** During very intense exercise, your circulatory system cannot keep up with your muscles demand for oxygen. To maintain a steady supply of energy, muscles shift from aerobic metabolism, which requires oxygen, to anaerobic metabolism, which does not. Muscles can break down carbohydrates anaerobically to provide energy, resulting in a compound called pyruvate. When oxygen is available, pyruvate can be further broken down aerobically to provide more energy. But when sufficient oxygen is not available, pyruvate is converted into lactic acid.

**S25. Ans.(b)**

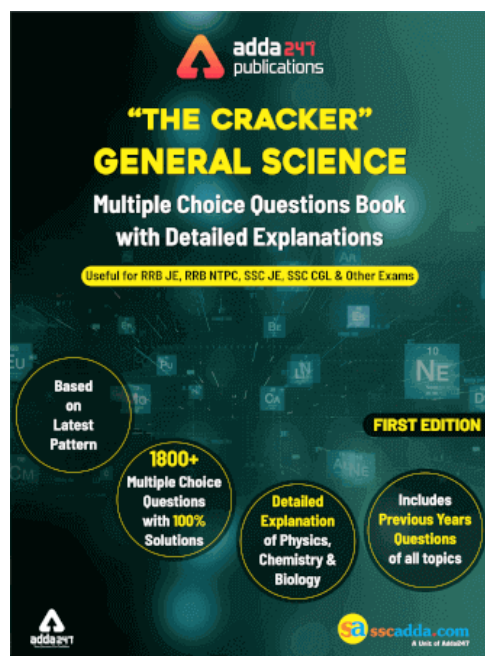
**Sol.** Washing soda is used for removing permanent hardness of water and as a cleaning agent for domestic purpose.

**S26. Ans.(c)**

**Sol.** In order to pasteurize milk, first, the milk is heated up to a longer time and then cooled suddenly within specified time. Pasteurization is a process invented the by French Scientist Louis Pasteur during the nineteenth century.

**S27. Ans.(c)**

**Sol.** Energy travels from Sun to Earth through Radiation.



**S28. Ans.(c)**

**Sol.** The glass or steel which is used in thermos bottle is coated with a silver layer to keep drinks at the same temperature for some time.

**S29. Ans.(c)**

**Sol.** Adhesive forces are the attractive forces between unlike molecules.

**S30. Ans.(b)**

**Sol.** Centripetal force is a real force that counteracts the centrifugal force and prevents the object from “flying out,” keeping it moving instead with a uniform speed along a circular path.

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