



Most Important Science Question for RRB NTPC JE (Solutions)

S1. Ans.(c)

Sol. Fathometer is a depth finder that uses sound waves to determine the depth of water.

S2. Ans.(a)

Sol. Barograph was invented in 1844 by the Frenchman Lucien Vidi (1805–1866).

S3. Ans.(c)

Sol. Power is the ratio of two scalar quantities and is thus scalar quantities.

S4. Ans.(a)

Sol. Pascal is not unit of Moment of Inertia. Moment of inertia may be expressed in units of kilogram metre squared ($\text{kg} \cdot \text{m}^2$) in SI units.

S5. Ans.(a)

Sol. Atmospheric pressure is measured by Barometer.

S6. Ans.(a)

Sol. Edward Teller, one of the most famous scientists of 20th century was known as “father of hydrogen bomb”.

S7. Ans.(b)

Sol. The time period of a pendulum depends on its length. As we know that $T = 2\pi\sqrt{l/g}$, thus the result is that the one variable that affects the period of the pendulum is the length of the string. Increases in the length lead to increases in the period.

S8. Ans.(c)

Sol. The rain drop spherical due to surface tension.

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S9. Ans.(b)

Sol. The Sun produces energy by the nuclear fusion of hydrogen into helium in its core. Since there is a huge amount of hydrogen in the core, these atoms stick together and fuse into a helium atom. This energy is then radiated out from the core and moves across the solar system. This is the main source of energy for the sun and stars. Besides that the gravitational contraction in stars is also the source of their energy.

S10. Ans.(d)

Sol. Diamond is a bad conductor of electricity but good conductor of heat. Electricity is conducted in a crystal by electrons that are relatively free. But in diamond, each carbon atom is covalently bonded with four other carbon atoms and there are no free electrons.

S11. Ans.(c)

Sol. Weightlessness experienced while orbiting the earth in space ships is due to Zero gravity.

S12. Ans.(a)

Sol. John Logie Baird was a Scottish engineer, innovator, one of the inventors of the mechanical television, demonstrating the first working television system on 26 January 1926.

S13. Ans.(a)

Sol. An electroscope is an early scientific instrument that is used to detect the presence and magnitude of electric charge on a body. It was the first electrical measuring instrument. The first electroscope, a pivoted needle called the versorium, was invented by British physician William Gilbert around 1600.

S14. Ans.(d)

Sol. Wavelength of red colour is largest and violet colour has the shortest wavelength.

S15. Ans.(c)

Sol. Graphene is an allotrope of Carbon in the form of a two dimensional atomic-scale hexagonal lattice in which one atom from each vertex.

S16. Ans.(c)

Sol. Hydrellox is a mixture of oxygen, helium, and hydrogen and is used for dives below 130 metres in commercial diving.

S17. Ans.(d)

Sol. The rubbing surface of a matchbox has powdered glass and a little red Phosphorus.

S18. Ans.(a)

Sol. Crystallisation is an example of physical change.

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S19. Ans.(b)

Sol. The reaction between baking soda (sodium bicarbonate) and vinegar (dilute acetic acid) generates carbon dioxide gas.

S20. Ans.(b)

Sol. Brass consists 68–71% Copper and rest is Zinc. Bronze consists 88% Copper and 12% Tin. German silver has almost 50% Copper. Delta consists 60% Copper, 38% Zinc, 2% Fe.

S21. Ans.(b)

Sol. Brass consists 68–71% Copper and rest is Zinc. Bronze consists 88% Copper and 12% Tin. German silver has almost 50% Copper. Gunmetal consists 85% Copper, 5% Tin, 5% Lead, 5% Zinc.

S22. Ans.(b)

Sol. The mass number of an element is the sum of a total number of protons and neutrons inside in its nucleus and represents by A. Therefore, mass number $A = \text{number of proton} + \text{number of neutron}$. Therefore, mass number $= 2 + 2 = 4$

S23. Ans.(a)

Sol. For oxygen, a molecule consists of two oxygen atoms, and has a weight of $2 \times 16 = 32$. For carbon dioxide, there is one carbon atom (weight 12) and two oxygen atoms (mass 16×2) for a total of 44. This means that carbon dioxide should be about $44/32 = 1.375$ times (ideally) as heavy as an equivalent volume of oxygen. In reality, carbon dioxide is 1.383 times as heavy as oxygen. Even after solidification carbon dioxide is slightly heavier than similar volume of solid oxygen.

S24. Ans.(b)

Sol. The acid produced by ants is called formic acid. The name comes from the Latin word for ant, which is "formica." Chemically, it is a simple carboxylic acid.

S25. Ans.(d)

Sol. In semiconductor physics, a donor is a dopant atom that, when added to a semiconductor, can form a n-type region. All except aluminium are donor atom.

S26. Ans.(b)

Sol. 0 K is equivalent to -273°C .

S27. Ans.(c)

Sol. Carbon gives hardness to Stainless Steel.

S28. Ans.(a)

Sol. Lead Sulphate is not soluble in water.

S29. Ans.(b)

Sol. The main constituent of biogas is methane. Biogas comprises primarily methane (CH_4) and carbon dioxide (CO_2) and may have small amounts of H_2S , H_2O (moisture).



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S30. Ans.(b)

Sol. The pH of human blood is between 7.35 to 7.45.

S31. Ans.(a)

Sol. Insulin is an antidiabetic drug.

S32. Ans.(c)

Sol. Milk is converted into curd or yogurt by the process of fermentation. Milk consists of globular proteins called casein. The curd forms because of the chemical reaction between the lactic acid bacteria and casein. Thus, lactase is the catalyst used in conversion of milk into curd.

S33. Ans.(b)

Sol. Nylon 66 is a type of polyamide or Nylon. It is used in plastic Industries in making bristles for brushes.

S34. Ans.(c)

Sol. Acid turns blue litmus paper red.

S35. Ans.(b)

Sol. LPG is a mixture of two flammable but nontoxic gases called propane and butane.

S36. Ans.(d)

Sol. All of these gets affected in Weil's disease.

S37. Ans.(c)

Sol. Fear of water is known as hydrophobia. Such type of patients gets afraid from river, lake sea etc. Hydrophobia is the old name of Rabies which is a viral disease. Its virus affects the nervous system.

S38. Ans.(c)

Sol. Anthophobia is an abnormal and persistent fear of flowers. The term comes from the Greek roots Anthos means flower and Phobos means fear.

S39. Ans.(b)

Sol. Group AB has both A and B antigens on red cells (but neither A nor B antibody in the plasma).

S40. Ans.(d)

Sol. In large amounts certain vitamins can be toxic, leading to a condition called vitamin toxicity or vitamin poisoning. Excess vitamin D accumulates in the liver and can cause bone calcification, headaches, weakness, nausea, vomiting, constipation, kidney stones and frequent thirst and urination. Accumulation of Vitamin A causes Toxicity in vitamin A is known as hypervitaminosis A.

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S41. Ans.(c)

Sol. Sphygmomanometer is an instrument for measuring blood pressure.

S42. Ans.(b)

Sol. Vitamin C also known as Ascorbic acid is easily destroyed by excessive heat and water, as well as exposure to air.

S43. Ans.(c)

Sol. Rickets is a bone disease that affects infants and young children. The child's growing bones fail to develop properly due to a lack of vitamin D. This can result in soft and weakened bones, fractures, bone and muscle pain, and bony deformities.

S44. Ans.(a)

Sol. The cell is the basic structural, functional, and biological unit of all known living organisms. A cell is the smallest unit of life that can replicate independently, and cells are often called the "building blocks of life". The study of cells is called cytology.

S45. Ans.(a)

Sol. Urine color generally ranges from a pale-yellow color to deep amber. This coloring is primarily caused by the pigment urochrome, also known as urobilin.

S46. Ans.(d)

Sol. Reptilians are the vertebrate animals which creep and crawl. Examples of organisms belonging to this class Chelone (Turtle), Chameleon (Tree lizard).

S47. Ans.(a)

Sol. Pericardium is the membrane enclosing the heart, consisting of an outer fibrous layer and an inner double layer of serous membrane.

S48. Ans.(a)

Sol. Bile is stored in the Gall bladder.

S49. Ans.(b)

Sol. Stomach is not a gland.

S50. Ans.(a)

Sol. All cells are surrounded by a plasma membrane. The membrane is composed of a phospholipid bilayer arranged back-to-back. The membrane is also covered in places with cholesterol molecules and proteins.

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