General Science Mega Quiz for RRB NTPC and SSC (Solutions)

S1. Ans.(c)
Sol. Bakelite can be molded very quickly, decreasing production time. Bakelite is an insulator it is very bad conductor and it has very high internal resistance. It is bad conductor of electricity. They are thermosetting plastic and cannot be softened by heating.

S2. Ans.(a)
Sol. Zinc can be beaten and converted into thin sheets.

S3. Ans.(a)
Sol. A chemical reaction in which hydrogen is added to, or oxygen is removed from, a compound is reduction and oxidation is opposite of reduction.
In statement I : Lead is not getting reduced
In statement II: carbon is oxidized
In statement III: Lead oxide is getting reduced.

S4. Ans.(d)
Sol.
Atomic Number = Number of Proton
Number of proton = 10
Mass number = Number of proton + Number of Neutron
Number of Neutron = 23 – 10 = 13

S5. Ans.(d)
Sol. Alkenes are more reactive due to the properties of the carbon-carbon bond. When alkenes are burnt in an atmosphere that is rich in oxygen and if the temperature is high enough, the alkenes burn giving CO_2 and H_2O. Alkenes do not burn with blue flame and Alkanes do not burn with yellow flame.

S6. Ans.(d)
Sol. Ethanol is a good solvent for organic compounds ,Boiling and melting points of ethanol are low with respect to water and also Ethanol is used in tincture of iodine So all option are correct.

S7. Ans.(d)
Sol. If the acceleration due to gravity on the surface of earth is g, then the acceleration due to gravity on the surface of a planet whose mass is same as that of earth and radius is half as that of earth is 4g.

S8. Ans.(a)
Sol. Relative density, or specific gravity, is the ratio of the density (mass of a unit volume) of a substance to the density of a given reference material. Specific gravity usually means relative density with respect to water. The term "relative density" is often preferred in scientific usage.

S9. Ans.(a)
Sol.Inertia is a property of matter that causes it to resist changes in velocity (speed and/or direction).

S10. Ans.(d)
Sol.The atmospheric pressure decreases with altitude because gas molecules which make up the air concentrate near lower altitude in response to Earth's gravity. Hence, air pressure is low at higher altitudes. Due to this difference in air pressure, the air inside the pen forces the ink to come out.

S11. Ans.(a)
Sol. Acids produce hydrogen ions, H+, in water. Bases produce hydroxide ions, OH-.

S12. Ans.(a)
Sol. Metals in general have high electrical conductivity, high thermal conductivity, and high density. Typically they are malleable and ductile, deforming under stress without cleaving.

S13. Ans.(b)
Sol. Blue litmus paper turns red under acidic conditions and red litmus paper turns blue under basic or alkaline conditions. Acids have pH value less than 7.

S14. Ans.(d)
Sol. Nylon is a high strength fibre. It is used for making fishing nets, ropes, parachutes and type cords, for making fabrics in textile industry, Crinkled nylon fibres are used for making elastic hosiery. It is used as plastic for making machine parts. It is also blended with wool to increase the strength.

S15. Ans.(a)
Sol. Milk has a pH of around 6.5 to 6.7, which makes it slightly acidic.

S16. Ans.(a)
Sol. Peristalsis is a particular, wave-like kind of muscle contraction because its purpose is to move solids or liquids along within the tube-like structures of the digestive and urinary tracts.

S17. Ans.(b)
Sol. Stomata are the microscopic openings or pores in the epidermis of leaves and young stems. Stomata are generally more numerous on the underside of leaves. They provide for the exchange of gases between the outside air and the branched system of interconnecting air canals within the leaf.

S18. Ans.(d)
Sol. Platelets, also called thrombocytes are a component of blood whose function (along with the coagulation factors) is to stop bleeding by clumping and clotting blood vessel injuries.

S19. Ans.(d)
Sol. A vector quantity is a quantity that is fully described by both magnitude and direction. On the other hand, a scalar quantity is a quantity that is fully described by its magnitude. Thus displacement, velocity and force are the example of vector quantity while volume is a scalar quantity.

S20. Ans.(b)
Sol. A pendulum clock runs faster in winter because in winter the length of the pendulum or the swing become smaller due to contraction and the clock begin to run fast.

S21. Ans.(d)
Sol. Human beings have stereoscopic vision (stereopsis) means having eyes at the front of their head. The two eyes are a few centimeters apart from each other. Due to this, two eyes see the same object from two slightly different angles and send two slightly different images to the brain. The brain combines these two images to build a three-dimensional picture of the object and we can judge the depth and distance of the object more accurately.

S22. Ans.(c)
Sol. The only time that the sun can be viewed with the naked eye is during a total eclipse when the moon completely covers the disk of the sun. But it is never safe to look at a partial or annular eclipse or the partial phases of a total solar eclipse without proper equipment and techniques. Failure to use proper observing method may result in permanent eye damage or severe visual loss caused by the ultraviolet (UV) radiations of a higher wavelength.

S23. Ans.(a)
Sol. The Sun and the moon appear elliptical near the horizon because of refraction.
S24. Ans.(c)
Sol. The bacteria which are found at 400-8000 ft into the deep sea, for example green Sulphur bacteria, uses infrared radiations for photosynthesis to produce energy.

S25. Ans.(b)
Sol. Electrolyte substance used in a car battery is Sulphuric acid (H_2SO_4). It is a strong acid.

S26. Ans.(b)
Sol. Milk contains a sugar called lactose. It also contains harmless bacteria called lactobacillus, which uses glucose for energy and creates lactic acid as a by-product. It is the lactic acid which makes the milk sour. The presence of lactic acid or lactate in milk is due to the fermentation of lactose caused mainly by lactic bacteria.

S27. Ans.(a)
Sol. Deserts have a very hot climate and receive very less rainfall annually. Like other green plants, desert plants also prepare food by photosynthesis, during which small pores (stomata) on a plant's leaves and stems open to absorb CO_2 from the air. However, each time a plant opens its pores, some water is lost. If this happens frequently during daytime, high temperatures will cause the water to evaporate quickly. To prevent this, the desert plants do not open their pores for carbon dioxide until the sun goes down.

S28. Ans.(c)
Sol. By process of diffusion, substance like carbon dioxide or oxygen can move across the cell membrane.

S29. Ans.(b)
Sol. The transport of soluble products of photosynthesis is called translocation and it occurs in the part of the vascular tissue.

S30. Ans.(d)
Sol. Plasma membrane allows or permits the entry and exit of some materials in and out of the cell.