

Sure Shot Questions For SSC & Railway Exams





Q. Mumps is an infection of _____.

Sol. Mumps is a viral disease caused by the mumps virus that causes swelling of parotid gland.

Initial signs and symptoms of Mumps:-

- o Fever
- o Muscle pain
- o Headache
- o Tired.
- 2. Fever, slow pulse, abdominal tenderness, delirium and rose coloured rash indicate the disease?

Sol. Measles

3. Which disease is caused by virus?

Solution | Chicken pox - It is caused by Varicella-zoster virus.

- o Small Pox It is caused by Variola virus.
- o Common Cold -It is caused by Rhinovirus.
- o AIDS (Acquired Immunono Deficiency Syndrome) It is caused by Human Immunodeficiency Virus (HIV).
- o Measles -It is caused by Measles virus.
- o Mumps -It is caused by Mumps virus.
- o Rabies It is caused by Rabies virus (Rhabdoviridae family).
- o Dengue fever -It is caused by Dengue virus.
- o Viral encephalitis It is an inflammation of the brain. It is caused by rabies virus, Herpes simplex, polio virus, measles virus, and JC virus.
- 4. What diseases spreads through respiratory route?

Ans. Bacterial meningitis, chickenpox, common cold, influenza, mumps, strep throat, tuberculosis, measles, rubella, whooping cough, SARS and leprosy

- 5. Which virus causes common cold?
- Sol. Common Cold -It is caused by Rhinovirus.
- 6. What is the meaning of word "Aufbau" in Aufbau's Principle?
- Sol. **Aufbau Principle:** The aufbau principle states that in the ground state of an atom or ion, electrons fill atomic orbitals of the lowest available energy levels before occupying higher levels. So, it describes the **building up** of the energy levels.
- Aufbau is a German noun that means "construction".
- 7. Which principle suggests that electrons are always filled in order of increasing energy? Sol. Method of building up or filling up a sequence of energy levels for an atom's electrons is based on Aufbau principle
- This principle suggests that electrons will fill up orbitals in order of increasing energy
- Lowest energy level is filled first
- 8. The law, governing the force between electric charges is known as Sol. Coulomb's law is used to calculate the force between the charges.
- 9. Whose law states that volume is directly proportional to pressure?
- Sol. **Boyle's Law** were related with the pressure of a gas and volume of a gas. The **Boyle's law** first published in **1662** by **Robert Boyle**. He was an Irish Physicist. According to the law, at a constant temperature, the product of a gases volume and pressure is always a constant. He proved this mathematically with the following equation.

P1V1=P2V2





10. Match List-I with List –II ans select the correct answer using the code given below the lists :

List-I

(Exponent)

- A). John Dalton
- B). Joseph Proust
- C). Antoine Lavoisier
- D). Joseph Louis

List-II

(Law)

- 1). Law of definite proportion by volume
- 2). Law of multiple proportion
- 3). Law of definite proportion by weight
- 4). Law of gay-Lussac conservation of mass
- A. A-1 B-3 C-4 D-2

Exponent	Law
John Dalton	Law of definite proportion by volume
Joseph Proust	Law of definite proportion by weight
Antoine Lavoisier	Law of conservation of mass
Joseph Louis Gay-Lussac	Law of multiple proportion

Sol.

- 11. Which law suggest a direct relationship between Temperature and Volume of a gas? Sol. Charles' lawis an experimental gas law that describes how gases tend to expand when heated. A modern statement of Charles' law is: When the pressure on a sample of a dry gas is held constant, the Kelvin temperature and the volume will be directly related
- 12. The laws which govern the motion of planets are called ______.
- Sol. The laws which govern the motion of planets are called Kepler's Laws. Kepler's Laws are for planetary motion. There are three laws which are as follows:
- 1. The Law of Orbits: All planets move in elliptical orbits, with the sun at one focus.
- 2. The Law of Areas: A line that connects a planet to the sun sweeps out equal areas in equal times.
- 3. The Law of Periods: The square of the period of any planet is proportional to the cube of the semimajor axis of its orbit.
- 13.Law of conservation of energy states that
- Sol. The law of conservation of energy states that "energy can neither be created nor be destroyed" but it can be changed from one form to another or transferred from one object to another. The total energy remains conserved.
- 14.Law of conservation of momentum states that
- Sol. According to the law of conservation of momentum the total momentum of an isolated system of interacting particles is conserved.
- 15. Which equation can be derived from the Newton's Second Law of Motion?
- Sol. **F=ma** is the equation that is derived from Newton's Second Law of Motion.





16.Newton's first law of motion states that-

Sol. Newton's first law of motion defines the inertia of body. It states that every body has a tendency to remain in its state (either rest or motion) due to its inerta.

- 17._____ effect can be observed when a fine beam of light enters a room through a small hole. This happens due to the scattering of light by the particles of dust and smoke in the air.
- Sol. Small sized particles can easily scatter a beam of visible light. This scattering of a beam of light is called the Tyndall effect after the name of the scientist who discovered this effect.
- Tyndall effect can also be observed when a fine beam of light enters a room through a small hole. This happens due to the scattering of light by the particles of dust and smoke in the air.

Source: NCERT Class 9 Chapter 2

18.0hm's law does not apply to-Sol.

$\hfill\square$ Ohm's law states that the current through	a conductor	between	two	points	is	directly
proportional to the voltage across the two points	nts.					

- \square Ohms 'Law' defines linear resistance & Semiconductors are not linear resistances, so they don't obey ohm's law.
- \square Also, ideal conductors don't obey ohm's law.
- 19.An electric wire is connected across a cell of e.m.f. E . The current $^{\it I}$ is measured by an ammeter of resistance R. According to ohm's Sol. E =IR
- 20.Newton's first law is also known as ______
- Sol. Newton first law of motion is also called as the law of inertia. According to this law, an object will remain at rest or move at a constant speed in a straight line unless it is acted on by an unbalanced force.
- 21.Barometer was invented by-
- Sol. Barometer was invented by Evangelista Torricelli, and is a scientific instrument used in meteorology to measure atmospheric pressure which in turn can state short term changes in the weather. The first barometer made by Torricelli used mercury as he realized that the variation of the height of the mercury from day to day was caused by changes in the atmospheric pressure.
- 22. Which instrument is used to measure altitudes in aircraft's?
- Sol. An **altimeter** is an instrument used to measure the **altitude of an object** above a fixed level. The measurement of altitude is called altimetry. A pressure altimeter is found in most **aircraft**.
- 23. The dynamo converts
- Sol. The Dynamo was the first electrical generator capable of delivering power for industry. The dynamo uses electromagnetic principles to convert mechanical rotation into a pulsing direct electric current through the use of a commutator
- 24. Microscope is used for the study which of the following?
- Sol. Microscope is used to study microscopic and nearby objects
- 25. Phonograph was invented by which of the following scientists?
- Sol. The **phonograph** is a device, invented in **1877**, by**Thomas Edison** for the **mechanical recording and reproduction** of **sound**. In its later forms, it is also called a **gramophone**.





26. Which instrument is used to measure Soil Water Tension?

Sol. Tensiometer is used to measure Soil Water Tension. Soil water tension is the force necessary for plant roots to extract water from the soil. Tensionmeter is used to schedule irrigation for the plants depending on soil moisture and is helpful in scientific study of roots and plants.

27.A tachometer is a device used to measure___

Sol. A **tachometer** is an instrument measuring the rotation speed of a shaft or disk, as in a motor or other machine. The device usually displays the revolutions per minute (RPM) on a calibrated analogue dial, but digital displays are increasingly common. Hence, option is B correct.

28. How to convert Galvanometer into Voltmeter-

Sol. A galvanometer can be converted in to voltmeter by connecting a very high resistance in series.

A galvanometer can be converted in to ammeter by connecting a shunt parallel to it.



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