

Chemistry Practical Class 11 Using a Chemical Balance Viva Questions with Answers

Q1: What is the difference between physical and chemical balance?

Answer:

Chemical balance is more delicate than physical balance. It can weigh up to four decimal points.

Q2: Why is the front door of the balance closed during weighing?

Answer:

While weighing an object, close the balancing door to prevent air currents from interfering with the reading. The operator should close the balance gate to avoid dust and dirt from entering the balance when the balance is complete.

Q3: What is rider? What is its weight?

Answer:

Rider was used to calculate the mass of objects or samples or the number of items. The balance is a comparing tool. The left panel compares normal or known weights to unknown specimens or items on the right panel. A rider with a mass of ten milligrams.

Q4: What is the standard solution?

Answer:

In analytical chemistry, a standard solution contains an exactly recognised concentration of an element or compound. A known solvent weight is dissolved to make a certain amount. A standard substance, such as a primary standard, is used to make it.

Q5: Why are substances not directly weighed on the chemical balance?

Answer:

An analytical balance is so sensitive that it can detect a single grain mass of a chemical compound. If a direct weighing approach is employed, the material should be added to the tared container that carries it, not the pan or even the weighing paper on the pan.

Q6: Why should weights not be lifted with the hand?

Answer:

Because some matter may be transferred from the hand to the weight, this results in weighing errors.

Q7: What are primary and secondary standard substances?

Answer:

If a substance is available in high purity, is stable and unaffected by air, does not acquire or lose moisture in the air, is readily soluble, and its solution in water remains stable for a long period, it is said to as a primary standard. A substance that does not have the following properties is referred to as a secondary standard substance. Primary standards include crystalline oxalic acid, anhydrous Na_2CO_3 , Mohr's salt, etc.

Q8: What is the maximum weight that can be weighed in a chemical balance?

Answer: 100 grams.

Q9: What is the principle of chemical balance?

Answer:

Chemical balance is a beam balance equipment that is used to test chemical quantities with extreme precision. It calculates the chemical's mass to four decimal places. It is employed in chemical quantitative analysis. It is capable of detecting even the tiniest variation.

Q10: Why is it important to zero the balance before using it?

Answer:

Subtracting the second reading from the first yields the mass of the substance taken. When weighing by difference, there is no need to zero the balance precisely because any errors in the first reading will be cancelled out when the readings are subtracted.

Q11: Who invented chemical balance?

Answer:

Scottish chemist Joseph Black invented the modern two-pan analytical balance.

Q12: What is the least count of chemical balance?

Answer:

The majority of the time, an electronic analytical balance will serve to weigh your samples and reference standards. The least count or readability of such a balance is 0.1mg or 0.0001gm.

Q13: What is the difference between zero and tare?

Answer:

To summarise, Tare should be used to remove the unnecessary weight of an item, such as a container, from the scale.

On the other hand, Zero will be used to return a scale to zero while nothing is placed on it.

Q14: What does it mean to calibrate a balance?

Answer:

Calibration involves comparing the balance's reading to standard known-mass calibration weights. Most electronic balances require Span Calibration in an educational setting, which involves calibrating the balance at two points on its scale.

Q15: What is the difference between accuracy and precision?

Answer:

Precision represents how repeatable measurements are, even if they are far from the recognised value, whereas accuracy reflects how near a measurement is to a known or accepted value. Measurements that are precise and accurate are repeatable and also very close to true values.