6. Measurements

Evaluation

1. Question

Ramu and Madhu are friends. They wanted to measure the length of a room. Ramu wanted to measure it in foot. But Madhu wanted to measure it in metres. Who is right in measuring the room in the internationally accepted system. Why?

Answer

Madhu is right in measuring the room in the internationally accepted system. If we measure length of a room using foot, them different person will measure different length we have to remove this inconsistent. That is the reason we have to use standard measurement. We measure length of room in metre (Symbol m) as it is internationally accepted SI unit of Length.

2. Question

Match the following

S.No.	Quantities	SI Unit
1	Temperature	Candela
2	Amount of Substance	Kelvin
3	Luminous Intensity	kilogram
4	Mass	Second
5	Time	mole

Answer

1. Temperature --- ---------- Kelvin

2. Amount of Substance ----- mole

3. Luminous Intensity --------- Candela

4. Mass ---------- kilogram

5. Time ---------- Second

1. Kelvin is the primary unit of temperature in SI system. Its symbol is K. The other unit to measure temperature is Celsius , Fahrenheit scale . The freezing point of water is 0^0C, in Celsius scale but at 0^0C, water molecules do not come to rest . At -273K all the molecular movement comes to rest. So to avoid negative value we use Kelvin scale :

-273^0C = 0K

2. SI unit for amount of substance is mole. It has the unit symbol mol. Amount of substance is not its mass , many student got confuses in mol and kilogram. The mass of an substance is the amount of matter contained in it whereas Amount of substance is the number of atom or molecules contained in it.

3. Candela is the SI unit for luminous intensity. Its symbol is cd. A common candle emits light with with a luminous intensity roughly equal to one cd .

4. SI unit of mass is kilogram. Its symbol is kg. We can defined mass as the amount of matter that the body is made up of. It is a characteristic of a body .

5. The SI unit of time is the second. We represent second by symbols.

3. Question

Which of the following statement is correct?

a. The unit of force is Newton

b. The unit of force is newton

Answer

Option (b) is correct. Units which are named after scientists should always be written with small letter. And when we have to write symbol οφυνιτναμεδαφτερσχιεντιστσηουλδβεωριττενβψχαπιταλλεττερ. For example: N for newton.

4. Question

Murugan measured the electric current. What unit should he use?

Answer

Murugan should measure the electric current in ampere (A) because ampere is SI unit of Electric Current.

5. Question

Say true or false.

a. The symbol for units should be written with a small letter.

b. There should be a full stop at the end of a symbol for units.

c. We should not use plurals when we write the unit in words.

d. The SI unit for mass is KG.

Answer

a) TRUE.

The symbol for units should be written with a small letter. For example: kg for kilogram .

b) FALSE.

There should be no full stop at the end of a symbol for units .

c) FALSE.

Plurals should be used in writing unit in words but while writing Symbols we are not allow to use plurals.

For example: 30 kgs is wrong correct is 30kg or 30 kilograms

d) FALSE.

The SI unit of mass is kg (small letter). Symbols for units should always written in a small letter.

6. Question

Project: Collect pictures of various measuring instruments and prepare an album.

Answer

Album:

Measuring Instruments:

Measuring Tape:-

This device is used to measure the dimension of object.

Measuring Mass:-

This is called digital weighing machine which is used to measure the weight of the object.

Measuring Time:-

This is commonly called clock used to measure time.

Measuring Temperature:-

This is Thermometer which is used to measure the temperature.

Measuring Light Intensity:-

This is photometer generally used to measure the light intensity.

Measuring Current:-

This is Ammeter used to measure current in the circuit. Electric current is measured in ampere (A) that is why letter capital A is written on the device scale.