Physics - FSC Part 1 Physics Chapter 1 Short Questions Preparation

Q1. Define international system of units.

Ans 1: The international system of units is a scientific method of expressing the magnitudes of quantities of important natural phenomana. There are seven base units in the system, from which other units are derived. This system was formarly called the meter-kilogram second (MKS) system.

Q2. Define acromegaly. Give its cause.

Ans 1: Abnormal increase in size of appendages and other body parts sue to excess release of thyroxin is called acromegaly.

Q3. Explain dimension of physics quantities ?

Ans 1: The power to which the fundamental units of first system must be raised to give the unit of a physics quantities are called dimensions of that quantity

Explanation: The dimension represents the nature of a physics quantity. It tells us that how a quantities is related to the base units .It is represented by capital letters in a square brackets For example

1. Dimension of mass length time are respectively written as [M] , [L]

Use of dimensions.

1. The dimension are used for checking the correctness of an equation or formula
2. The dimension are used for deriving of certain formula for a physics quantity.

Q4. Deduce the dimensions of gravitational constant ?

Ans 1:

Q5. How many nanoseconds are there in 1 year?

Ans 1: As 1 year = 3.136×10^{7} s

1 year = 3.1536×10^{7} X1s

1 year = $3.1536 \times 10^{7} \times 10^{9} \times 10^{-9}$s

1 year = $3.1536 \times 10^{7} \times 10^{-9}$ns

1 year = 3.1536×10^{16}ns

Q6. What are derived units? Explain.

Ans 1: The units associated with the derived quantities are called derived units. SI units for measuring all other physical quantities are derived from the base and supplementary units. For example , newton, joule,watt and pascal are derived units.

Q7. Define Born-Haber cycle and lattice energy?

Ans 1: Born-Haber Cycle: The sum of energy changes for a closed cyclic process is zero, If the initial and final states are same. Lattice Energy: The amount of energy released when gaseous ions of opposite charges combine to give one mole of a crystalline ionic compound.

Q8. Name two major types of errors in measurement and also define them.

Ans 1: The major types of errors in measurement are Systematic Error and Random Error.

Systematic Errors:Systematic errors occurs when repeated measurements of a quantity give the same values under the same conditions.This error is due to poor calibration or zero error in the stop watch. This error can be removed by applying correction factor

Ans 2: Random Error: Random error occurs when repeated measurements of a quantity give different values under the same conditions. This error is due to faulty procedure or negligence and inexperience of person at the time to start or stop the stop watch. This can be reduced by taking average value of observed readings .

Q9. Define least count and write meter rod's least count

Ans 1: smallest measurement hat can be taken by an instrument is called least count of that instrument Least Count

Q10. Discuss the assessment of uncertainty in the final result?

Ans 1: