

Physics - ICS Part 1 Physics Chapter 1 Short Questions Test

Q1. Are radian and steradian the basic units of SI? Justify your answer?

Ans 1: Radian and steradians are not the basic units of SI. These are the units of purely geometrical quantities i.e plane angle and solid angle respectively. The general conference on weight and measures has not yet classified these units under either base unit or derived units these are called supplementary units.

Q2. Describe the structure of ripple tank

Ans 1: ripple tank consists of a rectangular tray having glass bottom and is placed nearly half meter above the surface of table

Q3. Define least count and write meter rod's least count

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

Q4. What role SI units have played in the development of science

Ans 1: With the development of science and technology, S.I units fulfill the serious need of for a commonly accepted system of unit all over the world.

Q5. Define anhydrobiosis with an example

Ans 1: The ability to tolerate dehydration this process is called anhydrobiosis for example kangaroo rat a desert animal can tolerate dehydration without drinking water by feeding desert plants containing more carbohydrates which produce water of metabolism

Q6. Explain the term "precision" and accuracy?

Ans 1: The 'Precision' represents the magnitude of error in a measurement while the accuracy means to check how the measured values are closer to the actual value. The accuracy represents the relative error. It can be obtained by dividing the error with measured quantity.
The accuracy depends on the error if the error is greater than smaller will be the accuracy of the measurements and vice versa.
The accuracy of the measurements can be increased by taking several readings and taking their average.

Q7. What events occur in anaphase-I in meiosis?

Ans 1: During the anaphase of meiosis -1. The spindle fibers contract and each member of homologous chromosomes moves toward each pole. In this way half chromosomes reach to one pole and other half reaches to another pole.

Q8. Give four parasitic adaptation of flat worms.

Ans 1:

1. The epidermis is absent and there is formation of resistant cuticle for protection.
2. They have developed adhesive organs, such as sucker and hooks for attachment to the host.
3. There is degeneration of muscular and nervous system.

Q9. Write down two rules to find the significant digits in measurement

Ans 1: Rules to find significant digits are following
Zero between significant figures are always significant.

Q10. Define light year. How many meters are there in one light year?
[Speed of light = $3 \times 10^8 \text{ ms}^{-1}$)

Ans 1: A light year is the distance light travels in one year.
Since
 $S = vt$
or $S = vt$
 $S = (3 \times 10^8 \text{ ms}^{-1})(365 \times 24 \times 60 \times 60 \text{ s})$
 $S = 9.46 \times 10^{15} \text{ m}$