Physics (New Book) - 9th Class Physics English Medium Chapter 2 Preparation

Q1. Define scalar and vector quantties.

Ans 1: Scalar: A scalar is a physical quantity that can be described completely by its magnitude onoly Magnitude includes a numebr and an appropriate unit.
Example:- Mass, length, Time and speed, etc.
Vector:-
A vector is a physical quantity that requries both magnitude and direction to be described completely.
Example:- Velocity, displacemnt and force etc.

Q2. Can vectors be added like scalars.

Ans 1: No, it is not possible and vectors cannot be added like scalars. They areadded using head to tail rule. In this method, their directions also take into consideration.

Q3. Which cyclist travelled at the greatest speed? The lowest speed ? At constant speed?

Ans 1: Cyclist B started the fastest but stopped afte some time speed becomes zero. Cyclist C travelled the slowest. Cyclist A travelled at a constant speed.

Q4. Which cyclist travelled the most distance.

Ans 1: Cyclist B started teh fasterst but stopped after some time speed become zero. Cyclist C travelled the shoest. Cyclist A traveled at a constant speed.

Q5. Give 5 examples each for scalar and vector quantities

Ans 1: Scalar Quantities:- volume ,work, engry, pressure, power
Vector quantities: force, momentum, torque, acceleration, weight.

Q6. How a vector is represented graphically? Explain.

Ans 1: A vector can be represented graphically by drawing a straight line with an arrow head at one end. The length of line represnets the magintude of the vector quantity according to a suitable scale while the directio of arrow indicates the direction of the vector.

Q7. What does the length of the line represent in a graphical representation of a vector.

Ans 1: The length of the line represents the magnitude of the vector according to a suitable scale.

Q8. Define postive acceleration.

Ans 1: The acceeration is positive if the velocity is increasing.

Q9. Define Random motion.

Ans 1: If the body moves along an irregular path, the motion is called random motion.
Example:
i) The motion of bee
ii) The motionof gas molecules along a zig-zag path

Q10. What is variable acceleration.

Ans 1: If anyone of the magnitude or direction or both of them chanes it is called variable or mon uniform accelaration.