Physics (New Book) - 9th Class Physics English Medium Chapter 4 Preparation

Q1. Can a small child play with a fat child on the sea-saw Explain how

Ans 1: Yes a small child can play with a fat child if the fat child sists near the axis of rotation of the sea-saw and the small child sists away the axist of rotation.

Q2. Write the types of parallel force.

Ans 1: i) Like parallel forces. ii) Unlike parallel forces.

Q3. Define Trigonometric ratio.

Ans 1: The ratios between any two sides of a right angle triangle are called trigonometric ratio.

Q4. Define torque

Ans 1: Turning effect of a force is called torque or moment of force

Ans 2: Unit: Its unit is newton metre (Nm)

Q5. What is difference between stable and unstable

Ans 1: Stable: equilibrium: A body is said to be in stable equilibrium if after a slight tilt it return to its previous position.

Ans 2: Example: A book on a table is example A book on a table is example of stable equilibrium
Unstable equilibrium: If a body does not return to its previous position when sets free after a slightest till is said to be in unstable equilibrium

Ans 3: Example: A pencil in a vertical position on its lip. When ever you leav it the pencil topples over about its tip and fall down

Ans 4: Neutral equilibrium: If a body remains in its new position when disturbed from its previous position it is said to be in a state of neutral equilibrium
Example: In neutral equilibrium the centre of gravity of the body remains at the same height irrespective to its new position.

Q6. Differentiate between stable and neutral equilibrium.

Ans 1: Stable equilibrium: A body is said to be in stable equilibrium if after a slight tilt it returns to its previous position
In stable equilibrium centre of gravity of the body is at its lowest position and after the slight tilt it return to its previous position.

Ans 2: Neutral equilibrium: If a body remains in its new position when disturbed from its previous position, it is said to be in state of neutral equilibrium
In neutral equilibrium centre of gravity does not change its position. It keep its height

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Q7. Why the handle of a door is placed at the outer edge of the door

Ans 1: We can open or close door more easily by applying a force at the outer edge of a door rather than near the hinge (axist)
Because by this a long moment arm is obtained which produce more torque which helps to open the door more easily.

Q8. What is hypotenuse

Ans 1: The facing the angle of 90 is called hypotenuse e.g the side AC in the figure is hypotenuse
In right angle triangle the side opposite to right angle is called hypotenuse

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Q9. Define parallel forces. Write n names of its types

Ans 1: Parallel forces: Such forces which are parallel to each other are called parallel forces.

Ans 2: Types: There are two types of parallel forces.
Like parallel forces.
Unlike parallel forces.

Q10. Define Resultant vector.

Ans 1: A resultant vector is a single vector that has the same effect as the combined effect of all vectors to be added.