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

Q1. What is head to tail rule

Ans 1: When two or more than two vectors are added such that the head of the first vector is joined with tail of second vector and finally the tail of first vector is joined with the head of the second vector. This method of addition is called head to tail rule. The vector joining the tail of first vector to the head of last vector is called resultant vector a Graphical method used to find the resultant of two or more forces is called head to tail rule.

Q2. Define couple arm.

Ans 1: The perpendicular distance between two forces of couple is called couple arm.

Q3. Differentiate between like and unlike forces

Ans 1: Like Parallel forces: Such a parallel forces whose direction is same called are called like parallel forces
Example: The weights of apples in a sack are parallet to each other and also in the same direction.

Ans 2: Unlike parallel forces which are opposite to each other are called unlike parallel forces.
Example: Two force acting on a steering wheel to turn it are unlike parallel forces.

Q4. What is meant by principle of moments

Ans 1: A body is balance if the sum of clockwise moments acting on the body is equal to the sum of anticlock wise moments acting on its

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Q5. Force of 150N can loosen a nut when applied at end of a spanner 10cm long

Ans 1: Given data: F=150N
L=10cm=01.m

Ans 2: Solution: we know that FxL
= 150=0.1
=15Nm

Q6. Differentiate between torque and couple

Ans 1: Torque: Turing effect of force is called torque .
To produce a torque we need only one force at least
Torque or moment of force is equal to product of force F and moment arm L

Ans 2: Couple Couple is formed by the two unlike parallel forces of the same magnitude but not along the same line
To produce a couple we need two unlike parallel forces at least
The torque of a couple is equal to product of any force of couple and perpendicular distance between them

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Q7. What is Plumb line

Ans 1: Plumb line: A plumb line consists of a small metal bob lead or brass supported by a string. When the bob is suspended freely by the string, it rests the vertical direction due to its weight acting vertically down ward.

Q8. At which point an applied force does not produce rotation

Ans 1: A force applied at the centre of mass of a body does not produce any rotation rather the body moves in the direction of applied force

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Q9. What is meant by perpendicular components

Ans 1: Perpendicular Component: Those components which makes an angle of 90 with each other are called perpendicular components. The perpendicular components of force is fx and fy

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Q10. Explain 1st condition of equilibrium.

Ans 1: A body said to satisfy first condition of equilibrium if the resultant of all these forces acting on it is zero.
