Physics - FSC Part 1 Physics Chapter 2 Short Questions Preparation

Q1. When body is in .

1. Translation equilibrium
2. Rotational equilibrium

Ans 1:

Q2. Define the following?

1. Parallel vectors
2. Equal vectors
3. null vectors
4. Anti parallel vectors
5. Negative of a vectors

Ans 1: **Parallel Vectors:** Vectors are said to be parallel to each other if they are acting in the same direction.
Anti Parallel Vectors: Vectors are said to be anti parallel to each other if they are acting in opposite direction.
Equal vectors: Two vectors are said to be equal, if they have the same magnitude and same direction.
Negativeof a vector: Negative of a vector is that vector whose magnitude is the same to that of the given vector but opposite in direction.
Null Vector: A vectors whose magnitude is zero is known as null vector.

Q3. Define and explain vector product ? (or) Cross Product.

Ans 1:

Q4. Can a body rotate about its center of gravity under the action of its weight?

Ans 1: No a body cannot rotate about its center of gravity under the action of its weight.Because the whole weight of the body acts on its center of gravity. The moment arm is zero in this case .

Q5. Define Torque (or) Moment of force?

Ans 1: The turning effect produced in a body about a fixed point due to an applied force is known as torque (or) Moment of force.

Q6. State condition of rotational equilibrium.

Ans 1: The vector sum of all torque acting on any object must be zero.
When this condition of equilibrium is satisfied, there is no angular acceleration and body will be in rotational equilibrium.Hence, a body cannot rotate about center of gravity under the action of its weight.

Q7. What is the minimum number of unequal vector in to a null vector?

Ans 1: The minimum number of unequal vector to result in to a null vector must be three. If we add three vector of unequal magnitude in such a way that they forms the sides of a triangle, then their resultant must be zero.
In the given figure three vectors A, B, and C are added according to head to tail rule and they form the side of a triangle. Now for getting their resultant, we will combine the tail of A with the head of C which already coincides each other. Thus we get a null vector or zero vector as a resultant
R= A+B+C = 0

Q8. What are coplanar and concurrent forces?

Ans 1: All the forces lying in the same plane are called coplanar forces.
All the forces acting on the same point are called concurrent forces.

Q9. Discuss the subtraction of vector ?

Ans 1:

Q10. Define scalar and vector quantities?

Ans 1: **Scalar Quantities:** Those quantities which are completely specified by their magnitude only, are known as scalar quantities. For example Speed, Mass, energy, work, power.
Vector Quantities: Those physical quantities which are completely specified by their magnitude and proper direction are known as vector quantities. For example Momentum, Acceleration, torque.
