Physics - ICS Part 1 Physics Chapter 2 Short Questions Test

Q1. Define and explain vector product ? (or) Cross Product.

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. Differentiate between static and dynamic equilibrium.

Ans 1: Static Equilibrium: If a body is at rest, then it is said to be in static equilibrium.
Dynamic Equilibrium: If the body is moving with uniform velocity, then it is said to be in dynamic equilibrium.

Q4. 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

Q5. What are rectangular components of a vector?

Ans 1: The components of a vector which are perpendicular to rectangular components.each other are called

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Q6. The gravitational Force acting on a satellite is always directed towards the centre of the earth?

Ans 1: We known that the torque depends upon the moments arm and applied force. Mathematically we have
T = r*F
As we have given that the gravitational force acting on a satellite is directed towards the centre of the earth. As for central force, the

moment arm is zero r= 0 so T = o*F = 0
T= 0
Eq (2) shows that the torque produced by gravitational force acting on a satellite zero

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Q7. Discuss, how a vector is represented?

Ans 1: A vector is usually represented by the following two method.
Graphical representation: Graphically, a vector is represented by a bold straight line having an arrow head at its one end. The arrow indicates the direction of the given vector.
Symbolic representation: Symbolic, a vector is represented by any English alphabet having on arrow head upon it.

Q8. Discuss the addition of vector by rectangular component method?

Ans 1:

Q9. Define unit vector.How we find it?

Ans 1: A unit vector in a given direction is a vector with magnitudes one in that direction.Its is used to represent the direction of a vector.

Q10. Write two examples of vector product.

Ans 1:
