Physics - FSC Part 1 Physics Chapter 2 Short Questions Preparation

Q1. Define unit vector?

Ans 1: A vector whose magnitude is one is known as unit vector

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Q2. DIscuss the addition of vectors by graphical Method or geometrical Method?

Ans 1: We can add two or more than two vectors by geometrical method or graphical method to get their resultant vector. we use "Head-to-Tail rule for addition of vectors by graphical method or geometrical method.
The following steps must be followed to add vectors buy head-to-tail rule:

1. Select a suitable scale for the representation of given vectors
2. Draw the 1st vector according to the selected scale in the given direction
3. Draw the second vector according to the selected scale in the specified direction such that its tail touches the head of the first vector.
4. Now draw the 3rd vector according to the selected scale in the specified direction such that its tail touches the head of the second vector
5. Continue the above process for given number of vectors.
6. For getting the resultant vector, combination the tail of the first vector.
7. Measure the length of R which will given its magnitude.
8. To determine the direction of R measure the angle of R with respect to positive X-direction in anti clock wise sense.

Q3. What is the minimum number of unequal vector in to a null vector?Explain

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

Q4. Discuss the multiplication of a vector by a number?

Ans 1: We can multiple a vector by a number. If the number is positive, then the direction of given vector and product vector will remain the same. If the number id negative, then the given vector and product vector will be acting in opposite direction.

Q5. Is it possible to add a vector quantity to a scalar quantity?

Ans 1: No it is not possible to add a vector quantity to a scalar quantity because the physical quantities of same nature can be added. Vectors can be added to vectors and scalars are added in scalars,but the vectors can't be added to scalar.

Q6. Define and explain the scalar product?

Ans 1:

Q7. Write two examples of vector product.

Ans 1:

Q8. Write down the condition for a body to be in complete equilibrium.

Ans 1:

Q9. Define the term unit vector.

Ans 1: Vector having the unit magnitude is called the unit vector. It is used to indicate the direction of a given vector.

Q10. When body is in .

1. Translation equilibrium
2. Rotational equilibrium

Ans 1: