1 Condition for a quantity to be vector
(i)

(ii)

(iii)

Angular displacement is vector or scalar

2 Define Tensor

Example

3 Draw a diagram then write (i) Cosine rule (ii) Sine rule

4 Triangle / parallelogram law of vector addition (Draw diagram then write magnitude and direction formula)

5 Resultant of addition of two vector of equal magnitude a, which are inclined at angle θ,

Magnitude: direction:

6 Resultant of subtraction of two vector of equal magnitude a, which are inclined at angle θ,
Magnitude: direction:

7 Unit vector (formula)

S I unit of Unit Vector

TRUE / FALSE: A scalar or vector can never be divided by a vector.

8 Polygon law of vector addition

9 Lami's theorem

10 Scalar product (formula)

11 Angle between two vectors a and b having angle θ between them (formula)

12 (i) Component of vector a along vector b, if angle between a & b is θ

(ii) Component of vector a perpendicular to vector b, if angle between a & b is θ

13 Vector product (formula)

14 Vector triple product (Mathematically)

15 Area of parallelogram (vector formula)

16 Area of triangle (vector formula)

17 Scalar Triple Product(Mathematically)

18 Condition for three vectors A,B and C to be coplanar

19 Volume of Parallelopiped

20 Rule to find direction of axial vector

21 $\frac{d}{dt}\ (\vec{A} \cdot \vec{B}) =$

22 $\frac{d}{dt}\ (\vec{A} \times \vec{B}) =$

23 Work in vector form

24 Power in vector form

25 Electric flux in vector form

26 Magnetic flux in vector form

27 Potential energy of dipole in uniform electric field in vector form

28 Torque in vector form

29 Angular momentum in vector form

30 Relation between Linear velocity and angular velocity in vector form in circular motion

31 Torque on dipole in electric field in vector form

32 Define Null Vector or zero vector

Direction of Null Vector

33 If Vector $\vec{A}$ in terms of rectangular component in 3 d $\vec{A} = A_x\hat{i} + A_y\hat{j} + A_z\hat{k}$ then

Angle made with x axis

Angle made with y axis

Angle made with z axis

Direction cosine theorem:

$\sin^2 \alpha + \sin^2 \beta + \sin^2 \gamma =$

34 Condition for two vectors A and B to be parallel

35 Condition for two vectors A and B to be perpendicular

36 If A, B and C points are collinear, then $\vec{AB}$ = ------- $\vec{BC}$

37. Equal & Negative Vectors

38. Coplanar Vectors