**ALVA’S P.U. COLLEGE, MOODUBIDIRE.**

**CET CRASH COURSE [MATHS] – 2019 – 20**

**TOPIC : Vectors**

1. The unit vector in the direction of the sum of the vectors and is

a) b) c) d)

1. The position vector of a point R which divides the line joining the two points P and Q with position vectors , respectively in the ratio 1:2 externally is

b) c) d)

1. If the points represented by the position vectors and are collinear, then the value of m is

a) b) c) d)

1. A vector of magnitude units which makes an angle of with y and z – axes respectively is

a) b) c) d)

1. A unit vector of magnitude that are perpendicular to the plane of and is

a) b) c) d)

1. The angle between the vectors is

a) b) c) d)

1. If are the points with position vectors , respectively then the projection of along is

b) c) d)

1. If then a vector such that is

a) b) c) d)

1. The value of such that the vectors are orthogonal is

a)0 b) c) d)

1. For any vector

a) b) c) d)

1. If then the range of is

a) b) c) d)

1. If

a) b) c) d)

1. Which of the following statement is /are false?

If then it implies

b)If then the vectors are parallel

c)If are adjacent sides of a rhombus, then

d)both (b) and (c)

1. If is any non – zero vector then

a) b) c) d)

1. The value of k for which is parallel to holds if

a) b) c) d)

1. The vectors are the adjacent sides of a parallelogram. The acute angle between its diagonal is

b) c) d)

1. If for some non – zero vector then the value of
2. 1 b) c) d) none of these

1. The number of vectors of unit length perpendicular to the vectors and is

b) c) d)infinite

1. The vectors are coplanar if

b) c) d)

1. If are three vectors such that and then

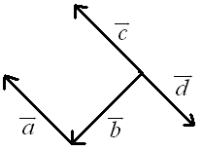
a) b) c) d)

1. A vector equally inclined to axes is

a) b) c) d)

1. The value of p such that is a unit vector is

b) c) d)

1. In the given figure, which of the vectors are collinear?

a) b)

c) d)

1. The value of if the projection of is 4 units is

a) b) c) d)

1. If two vectors are such that then the value of

a) b) c) d)

1. If are two unit vectors and is angle between them, then

a) b) c) d)

1. The value of if is

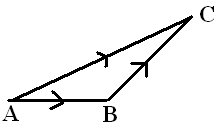
b) c) d)

1. The value of

a) b) c) d)

1. The area of the parallelogram having diagonals is (in sq units)

a) b) c) d)

1. In the given figure, which of the following is not true?

a) b)

c) d)

1. If are two collinear vectors then which of the following are incorrect?

a) for some scalar b)

c)the respective components of are proportional

d) both the vectors have same direction but different magnitudes

1. If is a non – zero vector of magnitude a and is a non zero scalar, then is unit vector if

a) b) c) d)

1. A unit vector in XY – plane making an angle of with the positive direction of x – axis is

b) c) d)

1. A girl walks 4 km towards west, then she walks 3 km in a direction east of north and stops. The vector representation of the girl’s displacement from the initial point of departure is

a) b) c) d)

1. A vector of magnitude 5 units and parallel to the resultant of the vectors

a) b) c) d)

1. If is the angle between two vectors then only when

b) c) d)

1. Let be two unit vectors and is the angle between them. Then is a unit vector if

a) b) c) d)

1. The vectors are the sides of a .Then the length of the median through A is

a) b) c) d)

1. If G is the centroid of , then

b) c) d)

1. If then a vector of magnitude units in the opposite director of is

a) b)

c) d)

1. Let be vectors of lengths 3,4,5 respectively and each one of them being perpendicular to the sum of the other two, then

a) b) c) d)

1. If are three non – coplanar vectors, then

a) b) c) d)none of these

1. If the triangle with vertices at has centroid at then

b) c) d)

1. If then

a) b) c) d)

1. If then the angle between is

a) b) c) d) both (a) and (c)

a) b) c) d)

1. If then

a) b)

c) d)none of these

1. If then the angle between

b) c) d)

1. The area of the triangle formed by the points is (in sq units)

a) b) c) d)

1. If then which of the following is true?

a) are orthogonal and they are not orthogonal to

b) are mutually orthogonal unit vectors

c) are mutually orthogonal and is a unit vector

d) are mutually orthogonal and are unit vectors

1. If

b) c) d)

1. If from a triangle then the internal angle of the triangle between is

a) b) c) d)

1. The area of the parallelogram with as adjacent sides is 20 sq units. Then the area of the parallelogram having as adjacent sides is (in sq units)

a) b) c) d)

1. If

b) c) d)

1. If , then

a) b) c) d)both (b) and (c)

1. If are three non coplanar vectors and vectors and are coplanar then

a) b) c) d) 0

1. If are three non coplanar vectors then the value of

a) b) c) d)

1. If then the scalar triple product of the vectors , is

b) c) d)

1. If are the adjacent sides of a parallelogram then the angle between its diagonals is

a) b) c) d)

1. Let . Then the areas of the triangles formed by with andwith are in the ratio is

a) b) c) d)