**Chapter 7. Vectors**

1) The triangle law for vector addition is equivalent to the

1. Commutative law
2. Associative law
3. Parallelogram law
4. First law

Answer: C

2) The position vector of a point P(x, y, z) is denoted by

 A) 

 B) 

 C) 

 D) 

Answer: B

3) If Cosα, Cosβ, Cosχ are the directions Cosines of a vector then

1. Cosα + Cosβ + Cos χ = 1
2. Cos2α + Cos2β + Cos2 χ = 0
3. Cos2α + Cos2β + Cos2 χ = 1
4. Cosα + Cosβ + Cos χ = 0

Answer: C

4) The numbers proportional to the direction cosines of a vector are called

1. Vector numbers
2. Scalar numbers
3. Direction numbers
4. Rational numbers

Answer: C

5) Two or more vectors are said to be collinear if they are

1. perpendicular to the same line
2. parallel to the same line
3. intersecting the same line
4. not parallel to the same line

Answer: B

6) Two or more vectors are said to be coplanar if they

1. are perpendicular to the same plane
2. are not parallel to the same plane
3. lie in the same plane
4. do not lie in the same plane

Answer: C

7) The component of  in the direction o f

z-axis is

1. 3
2. 4
3. 0
4. 7

Answer: C

8) the unit vector in the direction o f the vector  is

 A) 

 B) 

 C) 

 D) 

Answer: C

9) The vectors  are

1. Perpendicular
2. Parallel
3. Not parallel
4. None of these

Answer: B

10) The join of the mid points of the consecutive sides of any quadrilateral is

1. a square
2. a rectangle
3. a parallelogram
4. none of these

Answer: C

11) If A (1, 2, 3) and B (3, 4, 5) are two points then the mid pint of  is

1. (4, 3, 5)
2. (4, 6, 8)
3. (4, 5, 6)
4. (2, 3, 4)

Answer: D

12) The direction Cosines of  are

1. 0, 0, 1
2. 0, 1, 0
3. 1, 0, 0
4. 1, 1, 0

Answer: C

13) The direction cosines of the vector  are

1. 1, 1, 0
2. 
3. 
4. 

Answer: D

14) The Norm of the vector  is

1. 0
2. 2
3. 
4. 1

Answer: C

15) If  are parallel then the value of λ is

1. 4
2. 8
3. 12
4. – 12

Answer: D

**11. Products of Vectors**

1) If  is a unit vector then the value of  is

1. 1
2. 
3. 
4. 0

Answer: C

2) The projection of  in the direction of  is

 A) 

1. ab Cosθ
2. ab
3. 

Answer: D

3) If  and  are two vectors then inner product of  and  are

1. 1
2. – 1
3. 0
4. 2

Answer: A

4) The inner product of  and  is

1. 1
2. – 1
3. 0
4. 2

Answer: C

5) If  then the angle between the two vectors is

1. 45o
2. 60o
3. 90o
4. 180o

Answer: C

6) If the right bisectors of the two sides of a triangle pass through the origin then the right bisector of the third side will pass through the point

1. (1, 1)
2. (1, 2)
3. (1, 3)
4. (0, 0)

Answer: D

7) The equation 2x + 3y + 6z = 35 represents

1. a line
2. a circle
3. a plane
4. a parabola

Answer: C

8) If  is the position vector of a given point (1, 2, 3) and  is the position vector of any point (x, y, z) such that  then the locus of  describes

1. a circle
2. an ellipse
3. a plane
4. a sphere

Answer: D

9) the equation

 (x – 1)2 + (y – 3)2 + (z – 5)2 = 25 represents

1. a circle
2. a sphere
3. a plane
4. an ellipse

Answer: B

10) The coordinates of the center of the sphere x2 + y2 + z2 = 9 is

1. (0, 0)
2. (3, 3, 0)
3. (0, 0, 0)
4. (0, 0, 3)

Answer: C

11) If  is the position vector of a given point (1, 1, 1) and  is the position vector of any point (x, y, z) such that  then the locus of  describes.

1. a sphere
2. a circle
3. an ellipse
4. a plane

Answer: D

12) The distance from the origin to the plane

1. 7
2. 0
3. 1
4. 2

Answer: C

13) The contact in which the point coordinates are all positive is called

1. 1st octant
2. 2nd  octant
3. 4th octant
4. 8th octant

Answer: A

14) The point (3, 5, 8) lies in the

1. 3rd octant
2. 5th octant
3. 8th octant
4. 1st octant

Answer: D

15) The three coordinate’s planes divide all space into

1. 3 cells
2. 4 cells
3. 8 cells
4. 6 cells

Answer: C

16 If



 are the co-terminus edges of a parallelepiped then its volume is

1. 0
2. 8
3. 27
4. 1

Answer: A

17) If,  and

  then the value of  is

1. 28
2. 26
3. 0
4. 24

Answer: C

18) If volume of a parallelepiped with  as co-terminus edges is 24 the volume of the tetrahedron with the same edges is

1. 48
2. 12
3. 6
4. 4

Answer: D

*THE END*