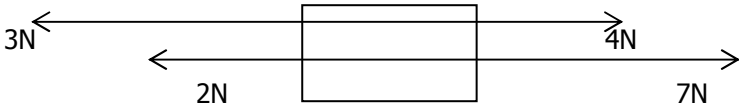


OBJECTIVE TYPE QUESTIONS

Chapter # 2 **SCALARS AND VECTORS**

1. Which of the following is a vector quantity?
(a) Mass (b) Speed (c) Temperature (d) Acceleration
2. Which one of the following is scalar?
(a) Acceleration (b) Velocity (c) Force (d) Work
3. In contrast to a scalar a vector must have a.
(a) Direction (b) Weight (c) Quantity (d) None of the above
4. Which is the following group of quantities represent the vectors:
(a) Acceleration, Force, .Mass (b) Mass .Displacement, velocity
(c) Acceleration, Electric flux force (d) Velocity, Electric field momentum
5. The following physical are called vectors:
(a) Time and mass (b) Temperature and density
(c) Force and Displacement (d) Length and volume
6. Vectors are physical quantities which are completely specified by:
(a) Magnitude-only (b) Direction only
(c) Magnitude and direction only (d) A & B
7. Scalar quantities have:
(a) Only magnitudes (b) Only directions
(c) Both magnitude and direction (d) None of these
8. A unit of a vector A is given by:
(a) $a = \frac{\vec{A}}{|\vec{A}|}$ (b) $a = \vec{A} \times |\vec{A}|$ (c) $\vec{a} = \frac{\vec{A}}{|\vec{A}|}$ (d) $\vec{a} = \vec{A}$
9. A vector in space has _____ components.
(a) one (b) Two (c) Three (d) Four
10. When a vector is multiplied by a negative number its direction.
(a) is reversed (b) remains unchanged
(c) make an angle of 60° (d) may be changed or not
11. A vector which can be changed by display parallel to itself and applied at any point is known as:
(a) Parallel vector (b) Null vector
(c) Free vector (d) position
12. A vector in any given direction whose magnitude is unity is called:
(a) Normal vector (b) parallel vector
(c) Free vector (d) unit vector
13. The position vector of a point p is a vector that represents its position with respect to:
(a) Another vector (b) Center of the earth
(c) Any point in space (d) origin of the coordinate system
14. Negative of a vector has a direction _____ that of the original vector.
(a) Same as (b). Perpendicular to
(c) Opposite to (d) Inclined to
15. The sum and different of two vector are equal in magnitude. The angle between the vectors is:
(a) 0° (b) 90° (c) 120° (d) 180°
16. Two forces act together on an object The magnitude of their resultant is least when the angle between the forces is:
(a) 0° (b) 45° (c) 60° (d) 180°
17. The dot product of I and J is.
(a) more (b) 1 (c) 0 (d) any value
18. Scalar product obtains when.
(a) A Scalar is multiplied by a scalar. (b) A scalar is multiplied by a vector
(c) Two vectors are multiplied to give a scalar
(d) Sum of two scalars is taken
19. If dot product of two vectors which are not perpendicular to each other is zero then either of the vector is obtain by adding two or more vectors is called:
(a) A unit vector (b) Opposite to the other
(c) A null vector (d) Position vector
20. The vector obtain by adding two or more vectors is called:
(a) Product Vector (b) Sum vector (c) Resultant vector (d) Final vector
21. Scalar product of two vectors obeys.
(a) Commutative Law (b) Associate Law
(c) Both "a" and "b" (d) None of the above
22. If the dot product of two non-zero vectors A and B is zero. Their cross product will be of magnitude.

23. (a) $AB \sin \theta$ (b) $B \cos \theta$ (c) $AB \sin 6 \theta$ (d) AB
If the angle between the two vectors is zero degree then their
24. (a) Dot product is zero (b) Cross product is zero
(c) Either dot or cross product is zero (d) Both dot & cross product is zero
 $k \times i = \frac{\quad}{j}$. (a) j (b) $-j$ (c) k (d) $-k$
25. If $\vec{a} \cdot \vec{b} = 0$ and also $\vec{a} \times \vec{b} = 0$ then
(a) \vec{a} and \vec{b} are parallel to each other (b) \vec{a} and \vec{b} are perpendicular to each
(c) \vec{a} and \vec{b} is a null vector (d) Either \vec{a} or \vec{b} is a null vector
26. The magnitude of product vector i.e. $\vec{A} \times \vec{B} = \vec{C}$
(a) Sum of the adjacent side (b) Area of the parallelogram
(c) Product of the parallelogram (d) Parameter of the parallelogram
27. If two vectors lie in xy -plan then their cross product lies.
(a) In the same plane (b) Adjacent plane
(c) Alone parallel to that plan (d) Parallel to the plane
28. Two focus of 8N and 6N are acting simultaneously at right angle the resultant force will be:
(a) 14N (b) 2N (c) 10N (d) 12N
29. Two forces each of magnitude F act perpendicular to each other. The-angle made by the resultant force with the horizontal will be.
(a) 30° (b) $2N$ (c) 60° (d) 90°
30. When two equal forces F and F makes an angle 180° with each other the magnitude of their resultant is.
(a) F (b) 0 (c) $2F$ (d) $0.5F$
31. The resultant of a 3N and 4N force acting simultaneously on an at right angles to each other is in Newtons.
(a) 0 (b) 1 (c) 3.5 (d) 5
32. $(6i + 4j - k)(4i + 2j - 2k) = >$
(a) $24i + 8j + 2k$ (b) 30 (c) 34 (d) 40
33. The diagram shows four acting on a block
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34. What is the resultant force?
(a) Zero (b) 5 N to left
(c) 6 N to right (d) 11 N to right

Chapter # 2

1	2	3	4	5	6	7	8	9	10
d	d	a	d	c	c	a	A	c	a
11	12	13	14	15	16	17	18	19	20
a	d	d	b	b	d	c	C	C	c
21	22	23	24	25	26	27	28	29	30
c	d	b	a	d	b	c	C	b	b
31	32	33							
d	c	c							