(EPC02-0001M)

- Two forces, one of 10 N and another of 6 N acts upon a body. The directions of the forces are unknown. The resultant force on the body is

  A) between 6 and 10 N
  B) between 4 and 16 N
  C) more than 6 N
  D) more than 10 N

(EPC02-0002E)

- Which (one or more) of the following quantities is a vector?

  A) pressure
  B) power
  C) current
  D) angular momentum

(EPC02-0003H)

- Two forces, equal in magnitude, have a resultant with its magnitude equal to either. The angle between them is

  A) 45^o
  B) 60^o
  C) 90^o
  D) 120^o

(EPC02-0004H)

- One of the two rectangular components of a force is 10 N and it makes an angle of 60^o with the force. The magnitude of the force is

  A) 7·1 N
  B) 14·1 N
  C) 17·3 N
  D) 20 N

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(EPC02-0005M)

- If three vectors A, B and C are 12, 5 and 13 in magnitude such that C = A + B, then the angle between A and B is

  A) 60^o
  B) 90^o
  C) 120^o
  D) none of these

(EPC02-0006M)

- Two non-zero vectors A and B are such that |A + B|=|A – B|. The angle between them is

  A) 0^o
  B) 60^o
  C) 90^o
  D) 180^o

(EPC02-0007M)

- Two vectors A and B are such that A + B = C and $A^2 + B^2 = C^2$. The angle between them is

  A) 0^o
  B) 90^o
  C) 120^o
  D) 180^o

(EPC02-0008M)

- The work done by a force is defined as W = F.S. In a certain situation F and S are not zero but the work done is zero. From this we conclude that

  A) F and S are in the same direction
  B) F and S are in opposite directions
  C) F and S are at right angles
  D) none of the above

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(EPC02-0009M)

- If A = 4i + 3j – 2k and B = 8i + 6j – 4k, the angle between A and B is

  A) 45^o
  B) 60^o
  C) 0^o
  D) 90^o

(EPC02-0010H)

- One of the two forces is double the other and their resultant is equal to the greater force. The angle between them is

  A) $\cos^{-1}\left(\frac{1}{2}\right)$
  B) $\cos^{-1}\left(-\frac{1}{2}\right)$
  C) $\cos^{-1}\left(\frac{1}{4}\right)$
  D) $\cos^{-1}\left(-\frac{1}{4}\right)$

(EPC02-0011M)

- The resultant of two forces of magnitudes 5 N and 10 N cannot be

  A) 4 N
  B) 6 N
  C) 9 N
  D) 13 N

(EPC02-0012M)

- Two vectors A and B lie in a plane. Another vector C lies outside this plane. Then A + B + C

  A) can be zero
  B) cannot be zero
  C) lies in the plane containing A + B
  D) lies in the plane containing A – B

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(EPC02-0013M)

- A particle is simultaneously acted upon by two forces, one of 3 N and the other of 4 N. The net force on the particle is

  A) 7 N
  B) 5 N
  C) 1 N
  D) between 1 N and 7 N

(EPC02-0014H)

- The scalar product of two vectors is $2\sqrt{3}$ and the magnitude of their vector product is 2. The angle between them is

  A) 30^o
  B) 45^o
  C) 60^o
  D) 90^o

(EPC02-0015M)

- The scalar product of vectors A = 2i + 5k and B = 3j + 4k is

  A) 20
  B) 23
  C) $5\sqrt{33}$
  D) 26

(EPC02-0016M)

- Two vectors A and B are such that |A| = |B| = |A – B|. The angle between them is

  A) 0^o
  B) 60^o
  C) 90^o
  D) 120^o

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(EPC02-0017E)

- Pick out the only vector quantity

A) pressure
B) impulse
C) gravitational potential
D) coefficient of friction

(EPC02-0018E)

- Pick out the only scalar quantity

A) power
B) electric field
C) magnetic moment
D) average velocity

(EPC02-0019H)

- Two forces have magnitudes in the ratio 3 : 5 and the angle between their directions is 60^{o}. if their resultant is 35 N, their magnitudes are

A) 12 N, 20 N
B) 15 N, 25 N
C) 18 N, 30 N
D) 21 N, 28 N

(EPC02-0020E)

- Which of the following is example of a scalar quantity?

A) Velocity
B) Force
C) Angular momentum
D) Electrostatic potential

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(EPC02-0021M)

- Which of the following vectors is/are perpendicular to the vector 4i – 3j?

  A) 4i + 3j
  B) 6i
  C) 7k
  D) 3i – 4j

(EPC02-0022M)

- Two forces of the same magnitude act at a point. The square of their resultant is 3 times the product of their magnitudes. The angle between them is

  A) 0^o
  B) 30^o
  C) 60^o
  D) 90^o

(EPC02-0023H)

- A particle moves from position $r_1 = 3i + 2j – 6k$ to position $r_2 = 14i + 13j + 9k$ under the action of a force F = (4i + j + 3k). The work done by the force is

  A) 50 units
  B) 75 units
  C) 100 units
  D) 200 units

(EPC02-0024E)

- Which of the following is a scalar quantity?

  A) electric current
  B) electric field
  C) acceleration
  D) linear momentum

PARHO AUR Chaajao

(EPC02-0025M)

- If $|V_1 + V_2| = |V_1 - V_2|$ and V_1 and V_2 are finite, then

A) V_1 is parallel to V_2
B) $V_1 = V_2$
C) $|V_1| = |V_2|$
D) V_1 and V_2 are mutually perpendicular

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Answer key	
1	B
2	D
3	D
4	D
5	B
6	C
7	B
8	C
9	C
10	D
11	A
12	B
13	D
14	A
15	A
16	B
17	B
18	A
19	B
20	D
21	C
22	C
23	C
24	A
25	D

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