21. Which one is a unit vector?

A. ??3 i^ + ??3 j^ + ??3 k^
B. 1/??3 i^ + 1/??3 j^ +1/ ??3 k^
C. ??3 / 3 i^ + ??3 / 3 j^ + ??3 / 3 k^
D. both b and c are correct

Answer: Option **D**

---

22. Angle between two vectors A and B can be determined by

A. their dot product
B. their cross product
C. head to tail rule
D. right hand rule

Answer: Option **A**

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23. The magnitude of cross product is equal to the dot product between them. The angle between the two vectors is

A. 30?
B. 45?
C. 60?
D. 180?

Answer: Option **B**

---

24. Torque is defined as

A. turning effect of force
B. cross product of position vector and force
C. product of force and moment arm
D. all a, b and c are correct

Answer: Option **D**

---

25. The dimension of torque is

A. [ML2T-2]
B. [MLT-2]
C. [ML2T]
D. [ML-2T-2]

Answer: Option **A**

---

26. SI unit of torque is

A. N.m
B. joule

C. both a and b are correct

D. neither a nor b is correct

Answer: Option **A**

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27. Torque acting on a body determines

A. acceleration

B. linear acceleration

C. angular acceleration

D. direction of motion of the body

Answer: Option **C**

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28. A body in equilibrium

A. always at rest

B. always in uniform motion

C. may be at rest or in uniform motion

D. may be at rest or in motion

Answer: Option **C**

---

29. A body will be in complete equilibrium when it is satisfying

A. Ist condition of equilibrium

B. 2nd condition of equilibrium

C. both Ist and 2nd condition of equilibrium

D. impossible

Answer: Option **C**

---

30. Which one is not a type of dynamic equilibrium?

A. rotational equilibrium

B. translational equilibrium

C. static equilibrium

D. both a and c are corret answer.

Answer: Option **C**