

## 24 Multiple choice questions

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1. angles measured clockwise from north; used in vector analysis
  - a. energy
  - b. gravity
  - c. dynamics
  - d. bearings
  
2. defined as displacement over time
  - a. average speed
  - b. average velocity
  - c. instantaneous velocity
  - d. gravity
  
3. defined as distance over time
  - a. average speed
  - b. displacement
  - c. average velocity
  - d. energy
  
4. the SI unit of mass
  - a. kilogram
  - b. force
  - c. energy
  - d. joule
  
5. when two or more objects exert forces on each other, generally over a short time interval
  - a. collision
  - b. friction
  - c. component
  - d. joule
  
6. the unity of energy (or work); the product of a force of one newton acting through a distance of one metre
  - a. energy
  - b. force
  - c. impulse
  - d. joule

7. one of the numerous vectors that can be added vectorially to yield a resultant vector
  - a. impulse
  - b. component
  - c. joule
  - d. collision
  
8. the time rate of change of velocity; can be a speeding up, slowing down and/or changing of direction
  - a. acceleration
  - b. inertia
  - c. collision
  - d. friction
  
9. the property of matter that causes it to resist changes in motion
  - a. energy
  - b. impulse
  - c. inertia
  - d. force
  
10. the velocity at an instant of time; found by taking the average velocity over an extremely small time interval; it is equal to the slope of the tangent at the point on a displacement-time graph
  - a. average velocity
  - b. inelastic collision
  - c. instantaneous velocity
  - d. displacement
  
11. friction caused by movement of bodies through the air
  - a. impulse
  - b. air resistance
  - c. inertia
  - d. acceleration
  
12. a force that always opposes motion; arises as a result of contact between different materials
  - a. inertia
  - b. gravity
  - c. friction
  - d. force

13. the capacity for doing work
  - a. force
  - b. inertia
  - c. bearings
  - d. energy
  
14. the product of force and time; equals the change in momentum
  - a. joule
  - b. force
  - c. inertia
  - d. impulse
  
15. the force directed towards the centre of a circle necessary for an object to follow a circular path
  - a. force
  - b. centripetal force
  - c. energy
  - d. centripetal acceleration
  
16. that region of space in which a mass experiences a force of attraction from other masses
  - a. gravitational field
  - b. friction
  - c. average speed
  - d. gravity
  
17. a collision in which kinetic energy is conserved
  - a. collision
  - b. elastic collision
  - c. inelastic collision
  - d. acceleration
  
18. that which changes the motion or shape of a body
  - a. force
  - b. energy
  - c. joule
  - d. impulse

19. the acceleration directed towards the centre of a circle about which an object is moving
  - a. centripetal acceleration
  - b. elastic collision
  - c. centripetal force
  - d. acceleration
  
20. the study of the causes of motion
  - a. dynamics
  - b. friction
  - c. gravity
  - d. bearings
  
21. the state in which a body does not undergo any changes in its motion; the resultant force is zero
  - a. collision
  - b. friction
  - c. kilogram
  - d. equilibrium
  
22. change in position in a given direction
  - a. displacement
  - b. component
  - c. impulse
  - d. dynamics
  
23. a collision in which kinetic energy is not conserved; it is conserved into other forms such as heat and sound
  - a. inelastic collision
  - b. acceleration
  - c. elastic collision
  - d. collision
  
24. the force of gravitation on an object
  - a. bearings
  - b. gravity
  - c. dynamics
  - d. energy