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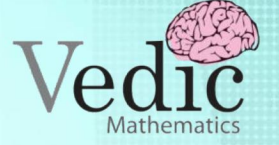
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Chapter-08

Work Energy & Power

1. Which of the following pair of physical quantity has same dimensions?

- (A) Work and Energy
- (B) Force and Power
- (C) Work and Power
- (D) Power and Motion

2. Energy stored in a spring in watch-

- (A) Kinetic Energy
- (B) Potential Energy
- (C) Heat Energy
- (D) Chemical Energy

3. A stone is dropped from the roof of a House towards ground. When will be the K.E. of stone maximum?

- (A) Just after it drops
- (B) Just before reaching the ground
- (C) Just after touching the ground
- (D) After covering the half distance

4. Which of the following is the cleanest source of energy?

- (A) Bio-fuel
- (B) Fossil fuel
- (C) Nuclear power
- (D) Wind energy

5. Which one of the following is not a non-conventional source of energy?

- (A) Solar Energy
- (B) Natural Gas
- (C) Wind Energy
- (D) Tidal Power

6. Kinetic energy depends on

- (A) The velocity or speed of the moving body
- (B) The mass of the moving body
- (C) The pressure of the moving body
- (D) Both mass and velocity of the moving body

7. Which of the following sources has the largest share in power generation in India?

- (A) Atomic power
- (B) Thermal power
- (C) Hydro power
- (D) Wind power

8. Which of the following is not a vector quantity?

- (A) Work
- (B) Force
- (C) Displacement
- (D) Velocity

9. _____ is the mechanical transfer of energy to a system or from a system by an external force on it.

- (A) Work
- (C) Intensity

- (B) Power
- (D) Force

10. Rate of work done is _____.

- (A) Energy
- (B) Power
- (C) Momentum
- (D) Impulse

11. Which of the following is false with reference to a photo-voltaic cell?

- (A) It is another name as solar cell
- (B) It can be used as infra-red detectors
- (C) It can store light energy in the form of electrical energy
- (D) It converts electric energy into light energy

12. One Kilowatt hour is equal to-

- (A) 3.6 Mega Joule
- (B) 3.8 Mega Joule
- (C) 3.2 Mega Joule
- (D) 4.0 Mega Joule

13. In which of the following cases, Kinetic energy is being used in performing work?

- (A) Paddling the bicycle to cover a distance
- (B) Driving a car to cover a distance
- (C) Wind mill grinding wheat grain
- (D) Rowing a boat in the lake

14. Which of the following pairs of physical quantities have the same dimensions?

- (A) Force and Power
- (B) Work and Power
- (C) Work and Energy
- (D) Momentum and Power

15. The energy stored in a watch spring is

- (A) Kinetic energy
- (B) Potential energy
- (C) Heat energy
- (D) Chemical energy

16. Energy that is produced commercially from coal is called

- (A) Light energy
- (B) Kinetic energy
- (C) Thermal energy
- (D) Potential energy

17. In a photocell light energy is converted into

- (A) Potential energy
- (B) Chemical energy
- (C) Heat energy
- (D) Electrical energy

18. A kilowatt-hour is unit of

- (A) Energy
- (B) Power
- (C) Electric charge
- (D) Electric current





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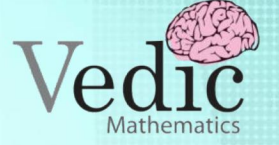
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19. Solar energy is converted into chemical energy during

- (A) Transpiration (B) Photosynthesis
(C) Diffusion (D) Osmosis

20. In a rechargeable cell what kind of energy is stored within the cell?

- (A) Electrical energy (B) Potential energy
(C) Chemical energy (D) Kinetic energy

21. The energy emitted by the Sun is due to

- (A) Chemical reaction (B) Nuclear fission
(C) Nuclear fusion (D) All of the above

22. How much mechanical work must be done to completely melt 1 gram of ice at 0°C?

- (A) 4.2 J (B) 80 J
(C) 336 J (D) 2268 J

23. A bullet is fired from a rifle which recoils after firing. The ratio of kinetic energy of the rifle to that of the bullet is

- (A) Zero (B) One
(C) Less than one (D) More than one

24. Direct conversion of solar energy with the use of a photovoltaic cell results in the production of

- (A) Optical energy (B) Electrical energy
(C) Thermal energy (D) Mechanical energy

25. A photo-electric cell converts

- (A) Mechanical energy to Electric energy
(B) Heat energy to Mechanical energy
(C) Light energy to Chemical energy
(D) Light energy to Electrical energy

26. A stone is dropped from the roof of a house towards the ground. The Kinetic Energy of the stone will be maximum:

- (A) Just after it is dropped
(B) When it is just on the half-way
(C) Just before it touches the ground
(D) When it touches the ground

27. A dynamo is used to convert

- (A) Mechanical energy into Electrical energy
(B) Electrical energy into Mechanical energy
(C) Electrical energy into Magnetic energy
(D) Magnetic energy into Mechanical energy

28. When a body falls from an aeroplane, there is increase in its

- (A) Kinetic energy (B) Mass
(C) Acceleration (D) Potential energy

29. In a water lifting electric pump, we convert

- (A) Electrical energy into Potential energy
(B) Kinetic energy into Electrical energy
(C) Kinetic energy into Potential energy
(D) Electrical energy into Kinetic energy

30. The device used to convert solar energy into electricity is

- (A) Photovoltaic cell
(B) Daniell cell
(C) Electrochemical cell
(D) Galvanic cell

31. A moving neutron collides with a stationary α -particle. The fraction of the kinetic energy lost by the neutron is

- (A) Nuclear (B) Joule
(C) Calorie (D) None of these

32. Which of the following have the same unit?

- (A) Work and Power
(B) Torque and Moment of Inertia
(C) Work and Torque
(D) Torque and Angular momentum

33. Which of the following is the second largest source of global energy?

- (A) Fossil fuel
(B) Nuclear Energy
(C) Renewable Energy
(D) None of these

34. The inexhaustible source of energy of stars is due to

- (A) Conversion of hydrogen to helium
(B) Conversion of helium to hydrogen
(C) Decay of radioactive elements
(D) Excess of oxygen

35. Which of the following reaction is the main cause of energy radiated from Sun?

- (A) Nuclear fission
(B) Nuclear fusion





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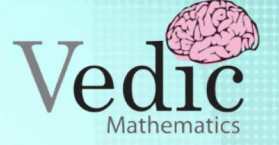
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- (C) Chemical reaction
(D) Diffusion reaction

36. Energy in the foods can be measured in which units?

- (A) Kelvin (B) Joule
(C) Calorie (D) Celsius

37. A flying jet possesses ____.

- (A) Potential energy
(B) Kinetic energy
(C) Wind energy
(D) Both kinetic and potential energy

38. When the speed of a moving object is halved, its ____.

- (A) Kinetic energy becomes $1/4$ of the original
(B) Kinetic energy becomes 4 times the original
(C) No change in the kinetic energy
(D) Acceleration is doubled

39. By the use of photovoltaic cell while converting solar energy which of the following is produced?

- (A) Light energy (B) Electric energy
(C) Chemical energy (D) Heat energy

40. When a ball is thrown vertically upwards, which of the following quantities remains constant during its motion?

- (A) Energy (B) Displacement
(C) Velocity (D) Acceleration

41. What is the SI unit of heat energy?

- (A) Joule (B) Newton
(C) Calorie (D) Kelvin

42. What is the unit of calorific value?

- (A) kN/kg (B) kJ/kg
(C) kW/sec (D) kCal/sec

43. Energy in the form of heat is wasted when a machine is operated. This heat is generated due to ____.

- (A) Burning (B) Friction
(C) Combustion (D) Lubrication

