

## MDCAT Physics Chapter 3 Work ,Energy & Power Online Test

Sr	Questions	Answers Choice
1	The energy which an $e^-$ acquires when accelerated through a potential difference of 1 volt is called?	A. 1 Joule B. 1 Electron volt C. 1 Erg D. 1 Watt
2	The gravity does no work, when the body moves:	A. Horizontally B. Vertically upwards C. Vertically downward D. At an angle of $45^\circ$ with horizontal
3	If the K.E. of a body is increased by 300%, its momentum will increase by:	A. 100 % B. 150 % C. $\sqrt{300\%}$ D. 175 %
4	A motor boat is travelling with a speed of 3.0 m/sec. If the force on it due to water flow is 500 N, the power of the boat is	A. 150 KW B. 1.5 KW C. heat energy D. chemical energy
5	A body of mass $m$ kg is lifted by a man to a height of one meter in 30 sec. Another man lifts the same mass to the same height in 60 sec. The work done by them are in the ratio	A. 1: 2 B. 1: 1 C. 2: 1 D. 4: 1
6	A person weighing 20 mg walks on a level platform with a speed of $2 \text{ ms}^{-1}$ . The work by the person against the force of gravity is:	A. Zero B. 2J C. 60J D. 600J
7	A force $\vec{F} = (3\hat{i} + 4\hat{j})$ newton is applied over a particle which displaces it from its origin to the point $\vec{r} = (4\hat{i} - 3\hat{j})$ meters. The work done on the particle is:	A. - 7 joules B. +13 joules C. + 7 joules D. +11 joules
8	If the stone is thrown up vertically and return to ground, its potential energy is maximum	A. during the upward journey B. during the upward journey C. at the maximum height D. at the bottom
9	In a gravitational field when work done by gravity is negative then	A. P.E increases B. P.E decrease C. None D. P.E remains same
10	Which of the following is a unit of energy?	A. unit B. whatt C. Horse Power D. None of the above
11	Ratio of dimension of K.E and power is:	A. 1:1 B. T:1 C. 1:T D. M:J
12	A body moves a distance of 10 m along a straight line under the action of a force of 5 N. If the work done is 25 joules, the angle which the force makes with the direction of motion of the body is?	A. 0 Degree B. 30 Degree C. 60 Degree D. 90 Degree
13	When the velocity of a body is doubled:	A. Its K.E is doubled B. Its P.E is doubled C. Its momentum is doubled D. Its acceleration is doubled
14	A ball is thrown vertically upwards. Neglecting air resistance, which statement is correct?	A. The kinetic energy of the ball is greatest at the greatest height attained B. The potential energy of the ball increase uniformly with time during the ascent C. By the principle of conservation of momentum. The momentum of the ball is constant throughout its motion D. By the principle of conservation of

D. By the principle of conservation of energy, the total energy of the ball is constant throughout its motion

15	A man pushes a wall and fails to displace it. He does:	A. Negative work B. Positive but not maximum work C. No work at all D. Maximum work
16	A man $M_1$ of mass 80 kg runs up a staircase in 15s. Another man $M_2$ also of mass 80 kg runs up the same staircase in 20s. The ratio of the power developed by them will be	A. 1 B. 4/3 C. 16/9 D. none of these
17	A force of 6 N act horizontally on a stationary mass of 2kg for 4s. The kineticenergy in joule is	A. 12 B. 72 C. 56 D. 888
18	An engine pumps out 40 kg of water in one second. The water comes out vertically upwards with a velocity of $3\text{ms}^{-1}$ . What is the power of engine in kilowatt?	A. 1.2kW B. 120kW C. 12kW D. 1200kW
19	A bomb of mass 30 kg at rest explodes into two pieces of masses 18 kg and 12 kg. The velocity of 18 kg mass is $6\text{ms}^{-1}$ The KE of other mass is	A. 324 J B. 256 J C. 245 J D. 524 J
20	A man weighing 500 N carries a load of 10 kg to the top of a building in 4 minutes. The work done by the man is $6 \times 10^4$ J. If he carries the same load in 8 minutes, the work done by the man will be:	A. $3 \times 10^4$ J B. $6 \times 10^4$ J C. $9 \times 10^4$ J D. $12 \times 10^4$ J