# ECAT Physics Chapter 4 Work and Energy

| Sr | Questions | Answers Choice |
|---|---|---|
| 1 | The value of escape velocity of Earth planet comes out to be: | A. 11 m/sec<br>B. 11 km/sec<br>C. 11 km/hour<br>D. 11 cm/sec |
| 2 | Work done in lower and bucket into the well is: | A. Zero<br>B. Positive<br>C. Negative<br>D. None of these |
| 3 | When a force of 0.5 N displaces a body through a distance of 2m in the direction of force, the work done is: | A. 2 J<br>B. 0.25 J<br>C. 1 J<br>D. 0.5 J |
| 4 | The dimensions of work | A. [MLT<sup>-1</sup>]<br>B. [MLT<sup>-2</sup>]<br>C. [ML<sup>2</sup>T<sup>-2</sup>]<br>D. [MLT] |
| 5 | Work done is maximum when angle between force and displacement is | A. 0°<br>B. 90°<br>C. 180°<br>D. None of these |
| 6 | Which of the following type of force can do no work on the particle on which it acts: | A. Frictional force<br>B. Gravitational force<br>C. Electric force<br>D. Centripetal force |
| 7 | The space around the earth in which its gravitational force acts on a body is called | A. Electric Field<br>B. Gravitational field<br>C. Magnetic field<br>D. Conservative field |
| 8 | Work-energy principle states that work done on the body by applied force is equal to change in: | A. Potential energy<br>B. Kinetic nergy<br>C. Linear momentum<br>D. None of these |
| 9 | Watt x second is unit of: | A. Force<br>B. Work<br>C. Power<br>D. None of these |
| 10 | Work has the dimensions as that of | A. Torque<br>B. Angular momentum<br>C. Linear momentum<br>D. Power |
| 11 | If one newton force acts on a body and displaces the body through 1m work done on body is | A. 1 dyne<br>B. 1 joule<br>C. 1KJ<br>D. 1 Watt |
| 12 | The work done by a force, keeping an object in circular motion with constant speed is: | A. Zero J<br>B. 1 J<br>C. 0.1 J<br>D. 0.01 J |
| 13 | When force and displacement are perpendicular to each other than work is equal to | A. Unity<br>B. Infinity<br>C. Zero<br>D. -Fd |
| 14 | When a force of 0.5 N displaces a body through a distance of 2m in the direction of force, the work done is | A. 0.5 J<br>B. 2 J<br>C. 0.25 J<br>D. 1 J |
| 15 | The consumption of energy by a 60 W bulb in 2 minutes is: | A. 2 watt-hour<br>B. 120 watt-hour<br>C. 30 watt-hour<br>D. None of these |

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| 16 | The types of mechanical energy is/are: | A. Kinetic energy<br>B. Potential energy<br>C. Both of these<br>D. None of these |
| 17 | The work performed on an object does not depend on: | A. Force applied<br>B. Angle at which force is inclined to the displacement<br>C. Initial velocity of the object<br>D. Displacement |
| 18 | Work is product of: | A. Force and velocity<br>B. Heat and energy<br>C. Force and displacement<br>D. None of these |
| 19 | A boy pulls a toy car through a distance of 5 m by applying a force of 0.5 N, Which makes an angle of 60° with the horizontal. The work done by the boy is: | A. 1.25 J<br>B. 12.5 J<br>C. 125 J<br>D. None of these |
| 20 | A body moves a distance of 10 m among a straight line under the action of a force of 5 N. If the work done is 25 J, the angle which the force makes with the direction of motion of a body is: | A. 0<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°<br>B. 30<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°<br>C. 60<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°<br>D. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° |