

## ECAT Physics Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	A typical rocket consumes about	A. 100 kg s <sup>-1</sup> of fuel B. 1000 kg s <sup>-1</sup> of fuel C. 10000 kg s <sup>-1</sup> of fuel D. 100000 kg s <sup>-1</sup> of fuel
2	One KWh is equal to:	A. $3.6 \times 10^2$ J B. 3.6 KJ C. $3.6 \times 10^1$ KJ D. 3.6 MJ
3	A ball is dropped from a height of 4.2 meters. To what height will take it rise if there is no loss of KE after rebounding?	A. 4.2 m B. 8.4 m C. 12.6 m D. none of these
4	Which of the following statements for an object in equilibrium is not true?	A. The object must be at rest B. The object can be at rest C. The object is moving at constant speed D. The acceleration of the object is zero
5	When a force is applied on a body, several effects are possible Which of the following effect could not occur?	A. the body rotates B. the body speeds up C. the mass of the body decreases D. the body changes its direction
6	The displacement coincides with the path of the motion when a body moves is a	A. curved line B. straight line C. may be curved or straight D. none of them
7	A motorist travels A to B at a speed at 40 km/h and returns at speed of 60km/h. His average speed will be	A. 40 km/h B. 48 km/h C. 50 km/h D. 60 km/h
8	Slope of velocity time graph represents:	A. Acceleration B. Speed C. Torque D. Work
9	A rocket carries its own fuel in the form of	A. liquid only B. liquid or solid C. liquid and solid D. liquid or solid and oxygen
10	The mass of a body measured by a physical balance in a lift at rest is found to be m, if the lift is going up with an acceleration a, its mass will be measured as	A. $m(1 - a/g)$ B. $m(1 + a/g)$ C. m D. Zero
11	The slopes of the tangent at any point on the curve gives the value of the	A. average velocity at that point B. instantaneous velocity at that point C. average acceleration at that point D. instantaneous acceleration at that point
12	Find the total displacement of a body in 8 seconds starting from rest with an acceleration of 20 cm/s <sup>2</sup>	A. 0.064 m B. 640 cm C. 64 cm D. 64 m
13	One newton is a force that produces an acceleration of 0.5 m/sec <sup>2</sup> in a body of mass:	A. 2 kg B. 3 kg C. 4 kg D. 8 kg
14	If m means mass of gases objected per second from a rocket and v shows the change in velocity, than mv is named as:	A. Force B. Energy C. work D. impulse

15	The magnitude of the force producing an acceleration of $10 \text{ m/sec}^2$ in a body of mass 500 grams is:	B. 4 N C. 5 N D. 6 N
16	The shortest distance between two points directed from its initial point to final point is called:	A. Velocity B. Displacement C. Speed D. Distance
17	In velocity of a particle at an instant is 10 m/s and after 5s the velocity of the particle is 20 m/s. The velocity 3s before in m/s is	A. 8 B. 4 C. 6 D. 7
18	When a horse pulls a cart, the force that makes the horse run forward is the force exerted by	A. The horse on the ground B. The horse on the cart C. The ground on the horse D. The ground on the cart
19	A snooker ball moving with velocity V collides head on with another snooker ball of same mass at rest. If the collision is elastic, the velocity of second snooker ball is	A. Zero B. Infinity C. V D. 2 V
20	A certain force gives an acceleration of $2 \text{ m/sec}^2$ to a body if mass 5 kg. The same force would give a 29 kg object an acceleration of:	A. $0.5 \text{ m/sec}^2$ B. $5 \text{ m/sec}^2$ C. $1.5 \text{ m/sec}^2$ D. $9.8 \text{ m/sec}^2$