## ECAT Pre General Science Physics Chapter 3 Motion and Force Online Test

| Sr | Questions | Answers Choice |
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| 1 | In the above figures, tell which set is graphs shows that a body is moving uniform velocity: | A. (i) and (ii)<br>B. (ii) and (iii)<br>C. (i) and (iii)<br>D. (ii) and (iv) |
| 2 | If the velocity time graph is a straight line parallel to time-axis, then it means that: | A. The body is moving with uniform velocity<br>B. The body is moving with uniform acceleration<br>C. The body is at rest<br>D. None of above |
| 3 | The magnitude of the force producing an acceleration of 10 m/sec2 in a body of mass 500 grams is: | A. 3 N<br>B. 4 N<br>C. 5 N<br>D. 6 N |
| 4 | A body is moving with constant velocity of 10 m/sec in the north east direction. Then its acceleration will be: | A. 10 m/sec2<br>B. 20 m/sec2<br>C. 30 m/sec2<br>D. Zero |
| 5 | A body of mass 5 kg is acted upon by a total change n momentum will be: | A. 10 NS<br>B. 100 NS<br>C. 140 NS<br>D. 200 NS |
| 6 | When brakes are applied to a fast moving car, the passengers will be thrown: | A. Forward<br>B. Backward<br>C. Downward<br>D. None of these |
| 7 | Which one of the following is dimensionless. | A. Acceleration<br>B. Velocity<br>C. Density<br>D. Angle |
| 8 | The dimension of linear inertia is: | A. $MLT^2$<br>B. $MLT^{-2}$<br>C. $ML°T°$<br>D. $MLT^{-1}$ |
| 9 | A ball is dropped from a height of 4.9 meters. To what height will it take is if there is... | A. 4.2 m |

| 9 | 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? | B. 8.4 m<br>C. 12.6 m<br>D. none of these |
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| 10 | A body moving with an acceleration of 5 m/sec$^2$ started with velocity of 10 m/sec. What will be the distance traversed in 10 seconds? | A. 150 m<br>B. 250 m<br>C. 350 m<br>D. 400 m |
| 11 | The shortest distance between two points directed from its initial point to final point is called: | A. Velocity<br>B. Displacement<br>C. Speed<br>D. Distance |
| 12 | Ethanol (alcohol) as a type of: | A. Electric fuel<br>B. Bio fuel<br>C. Nuclear fuel<br>D. None of these |
| 13 | Root out of the conventional source of energy: | A. Energy from biomass<br>B. Hydroelectric energy<br>C. Geothermal energy<br>D. None of these |
| 14 | Biomass includes: | A. Crop residue<br>B. Natural vegetation<br>C. Animal dung<br>D. All of these |
| 15 | The consumption of energy by a 1000 watt heter in half an hour is: | A. 5 Kwh<br>B. 0.5 Kwh<br>C. 2.5 Kwh<br>D. 3.2 Kwh |
| 16 | One KWh is equal to: | A. $3.6 \times 10^2$ J<br>B. 3.6 KJ<br>C. $3.6 \times 10^1$ KJ<br>D. 3.6 MJ |
| 17 | The velocity given to a body to go out of the influence of earth's gravity is known as: | A. Terminal velocity<br>B. Orbital velocity<br>C. Escape velocity<br>D. None of these |
| 18 | When two protons are brought closer potential energy of both of them: | A. Increases<br>B. Decreases<br>C. Remains same<br>D. None of these |
| 19 | A body of weight 1 N has a kinetic energy of 1 joule when its speed is: | A. $1.46$ m sec$^{-1}$<br>B. $2.44$ m sec$^{-1}$<br>C. $3.42$ m sec$^{-1}$<br>D. $4.43$ m sec$^{-1}$ |
| 20 | Tick the conservation force: | A. Tension in a string<br>B. Air resistance string<br>C. Elastic spring force<br>D. Frictional force |
| 21 | Work done along a closed path in a gravitational field is: | A. Maximum<br>B. Minimum<br>C. Zero<br>D. Unity |
| 22 | A body whose momentum is constant must have constant | A. Acceleration<br>B. Velocity<br>C. Force<br>D. None of these |
| 23 | Swimming is based on the principle of | A. Newton's 1st law<br>B. Newton's 2nd law<br>C. Newton's 3rd law<br>D. All |
| 24 | If rope of lift breaks suddenly. The tension exerted by the surface of lift is (a=Acceleration of lift) | A. mg<br>B. m (g+a)<br>C. m (g - a)<br>D. 0 |
| 25 | A body of mass 1.0 kg is falling with an acceleration of 10 m/s$^2$. Its apparent weight will be (g=10 m/s$^2$) | A. 1.0 kg wt<br>B. 2.0 kg wt<br>C. 0.5 kg wt<br>D. Zero |
| 26 | When a body is moving on a surface, the force of friction is called | A. Static friction<br>B. Dynamic friction<br>C. Limiting friction<br>D. Rolling friction |

| 27 | A railway engine (mass $10^4$ kg) is moving with a speed of 73 km/h. The force which should be applied to bring it to rest over a distance of 20 m is | A. 3,600 N<br>B. 7,200 N<br>C. 10,000 N<br>D. 100,000 N |
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| 28 | 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<br>B. The horse on the cart<br>C. The ground on the horse<br>D. The ground on the cart |
| 29 | When a bicycle is in motion, the frictional forces exerted by the ground are | A. In the forward direction on both the wheels<br>B. In the backward direction on both the wheels<br>C. In the forward direction on the front wheel and the backward direction on the rear wheel<br>D. In the backward direction on the front wheel and the forward direction on the rear wheel |
| 30 | In an elevator moving vertically up with an acceleration 'g' the force exerted on the floor by a passenger of mass M is | A. Mg<br>B. 1/2 Mg<br>C. Zero<br>D. 2 Mg |