

## Physics ECAT Pre Engineering Chapter 3 Motion and Force

Sr	Questions	Answers Choice
1	If the acceleration of a body is negative, then slope of the velocity-time graph will be:	A. Zero B. Positive <b>C. Negative</b> D. Infinity
2	Range of a projectile is $R$ , when the angle of projection is $30^\circ$ . Then, the value of the other angle of projection for the same range, is	A. $45^\circ$ B. $60^\circ$ C. $50^\circ$ D. $40^\circ$
3	In the expression $F \times t$ , the force $F$ is	A. total force B. instantaneous force <b>C. average force</b> D. all of them
4	Velocity of a body changes if	A. direction of the body changes B. speed of the body changes C. neither speed nor direction changes <b>D. either speed or direction changes</b>
5	Distance traveled by a body falling from rest in the first, second and third second is in the ratio of	A. $1 : 2 : 3$ B. $1 : 3 : 5$ C. $1 : 4 : 9$ D. None of the above
6	If rope of lift breaks suddenly. The tension exerted by the surface of lift is ( $a$ =Acceleration of lift)	A. $mg$ B. $m(g+a)$ <b>C. <math>m(g - a)</math></b> D. 0
7	In velocity of a particle at an instant is $10 \text{ m/s}$ and after $5\text{s}$ the velocity of the particle is $20 \text{ m/s}$ . The velocity $3\text{s}$ before in $\text{m/s}$ is	A. 8 <b>B. 4</b> C. 6 D. 7
8	If a car rest acceleration uniformly to a speed of $144 \text{ km/h}$ in $20 \text{ s}$ it covers a distance of	A. $20 \text{ m}$ B. $400 \text{ m}$ <b>C. <math>1440 \text{ m}</math></b> D. $2880 \text{ m}$
9	The collision in which KE is conserved but momentum is not conserved is called:	A. Elastic collision B. Inelastic collision C. any these <b>D. None of these</b>
10	Rate of change of momentum is called	A. Impulse <b>B. Force</b> C. Torque D. Momentum
11	When a shell explodes in mid-air, its fragments fly off in	A. only one direction B. in two direction <b>C. different directions</b> D. a particular direction
12	The velocity of a body at any instant of its motion is known as	A. average velocity <b>B. instantaneous velocity</b> C. uniform velocity D. none of them
13	Work done along a closed path in a gravitational force is:	A. maximum B. Minimum <b>C. Zero</b> D. Unity

14 A dirty carpet is to be cleaned by heating. This is in accordance with \_\_\_\_\_ law of motion.  
B. Second  
C. Third  
D. None of these

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15 The short distance between two points direction from its initial point to final point is called:  
A. Velocity  
B. Displacement  
C. Speed  
D. Distance

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16 A body starting from rest covers a distance of 0.45 Km and acquires a velocity of  $300 \text{ Km h}^{-1}$ .  
its acceleration will be  
A.  $7.71 \text{ m s}^{-2}$   
B.  $0.5 \text{ m s}^{-2}$   
C.  $0.15 \text{ m s}^{-2}$   
D.  $0.092 \text{ m s}^{-2}$

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17 When a person jumps off the ground, the reaction force of the ground is  
A. greater than the weight of the person  
B. smaller than the weight of the person  
C. equal to the weight of the person  
D. zero

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18 Distance covered by a freely falling body in 2 sec will be  
A. 4.9 m  
B. 19.6 m  
C. 29.2 m  
D. 44.1 m

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19 The motion of a projectile is  
A. one dimension  
B. two dimension  
C. three dimension  
D. all of them

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20 The horizontal range of projectile, at a certain place, depends upon  
A. the mass of the projectile  
B. velocity of projection  
C. angle of projection  
D. angle as well as velocity of projection

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