

NTS Educators SSE (Science) Jobs Test

Sr	Questions	Answers Choice
1	Two bodies of masses m_1 and m_2 have equal momentum their kinetic energies E_1 and E_2 are in the ratio	<p>A. $\sqrt{m_1}$: $\sqrt{m_2}$</p> <p>B. $\sqrt{m_1}$: $\sqrt{m_2}$</p> <p>C. $\sqrt{m_1}$: $\sqrt{m_2}$</p> <p>D. $\sqrt{m_1}$: $\sqrt{m_2}$</p>
2	A body of mass 2 kg is thrown up vertically with K.E of 490 joules If the acceleration due to gravity is 9.8 m/s^2 the height at which the K.E of the body becomes half its original value is give by:	<p>A. 50 m</p> <p>B. 12.5 m</p> <p>C. 25 m</p> <p>D. 10 m</p>
3	A body moves a distance of 10 m along a straight line under the action of a force of 5 Newtons, if the work done is 25 joules the angle which the force takes with the direction of motion of the body is:	<p>A. 0°</p> <p>B. 30°</p> <p>C. 60°</p> <p>D. 90°</p>
4	Two masses of 1 g and 4 g are moving with equal kinetic energies The ratio of the magnitudes of their linear moments is:	<p>A. 4 : 1</p> <p>B. $\sqrt{2}$: 1</p> <p>C. 1 : 2</p> <p>D. 1 : 16</p>
5	Which of the following four statements is false?	<p>A. A body can have zero velocity and still be accelerated</p> <p>B. A body can have a constant velocity and still have a varying speed</p> <p>C. A body can have a constant speed and still have a varying velocity</p> <p>D. The direction of the velocity of a acceleration is constant</p>
6	The initial velocity of a body moving along a straight line in 7 m/s. It has a uniform acceleration of 4 m/s^2 . The distance covered by the body in the 5th second of its motion is	<p>A. 25 m</p> <p>B. 35 m</p> <p>C. 50 m</p> <p>D. 85 m</p>
7	The acceleration 'a' in m/s^2 of a particle is given by $a = 3t^2 + 2t + 2$, where 't' is the time if the particle starts out with a velocity $v = 2 \text{ m/s}$ at $t = 0$, then the velocity at the end of 2 second is	<p>A. 12 m/s</p> <p>B. 24 m/s</p> <p>C. 18 m/s</p> <p>D. 36 m/s</p>
8	A body is dropped from a tower with zero velocity reaches ground in 4s. The height of the tower is about	<p>A. 80 m</p> <p>B. 20 m</p> <p>C. 160 m</p> <p>D. 40 m</p>
9	What will be the ratio of the distance moved by a freely falling body from rest in 4 th and 5 th seconds of journey?	<p>A. 4 : 5</p> <p>B. 7 : 9</p> <p>C. 16 : 25</p> <p>D. 1 : 1</p>
10	A train of 150 m length is going towards north direction at a speed of 10 ms^{-1} A parrot flies at a speed of 5 ms^{-1} towards south direction parallel to the railway track, The time taken by the parrot to cross the train is equal to	<p>A. 12 s</p> <p>B. 8 s</p> <p>C. 15 s</p> <p>D. 10 s</p>
11	The sum of the magnitude of two forces acting at a point is 18 and the magnitude of their resultant is 12. If the resultant is at 90° with the force of the smaller magnitude then their magnitude are:	<p>A. 3, 15</p> <p>B. 4, 14</p> <p>C. 5, 13</p> <p>D. 6, 12</p>

12	A motorist travels A to B at a speed at 40 km/h and returns at speed of 60 km/h. His average speed will be:	A. 40 km/h B. 48 km/h C. 50 km/h D. 60 km/h
13	The velocity of a particle at an instant is 10 m/s and after 5 s 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
14	To get a resultant displacement of 10 m, two displacement vectors of magnitude 6 m and 8 m should be combined	A. Parallel B. Antiparallel C. At angle 60° D. Perpendicular to each other
15	The dot product of two vectors is negative when	A. They are parallel vectors B. They are anti-parallel vectors C. They are perpendicular vectors D. None of the above is correct