

Turning Effect of Forces

Sr	Questions	Answers Choice
1	A seesaw balances perfectly with two children of equal weight sitting at equal distances from the fulcrum. If one child moves closer to the fulcrum.	A. The seesaw topples B. The seesaw tips towards the child who stayed further away C. The seesaw tips towards the child who moved closer D. The seesaw remains balanced
2	You are trying to loosen a nut using a spanner, but it is not working. In order to open the nut, you need to.	A. Use plastic and soft spanner B. Use a spanner of small length C. Insert a pipe to increase length of spanner D. Tie a rope with spanner
3	A body in equilibrium must not have	A. Speed B. Velocity C. Acceleration D. Quantity of motion
4	A man walks on a tight rope. He balances himself by holding a bamboo stick horizontally. It is an application of	A. Law of conservation of momentum B. Principle of moments C. Newton's third law of motion D. Newton's second law of motion
5	The correct order of comparison for the terminal speeds of a raindrop, snowflake, and hailstone is.	A. Raindrop = Snowflake = Hailstone B. Raindrop > Snowflake > Hailstone C. Hailstone > Raindrop > Snowflake D. Snowflake > Raindrop > Hailstone
6	A shopkeeper sells his articles by a balance having unequal arms of the pans. If he puts the weights in the pan having shorter arm, then the customer.	A. Gains B. Loses C. Neither loses nor gains D. Not certain
7	You throw a net, it opens fully underwater, spreading out its mesh evenly. Compared to the moment it left your hand, where is the net's center of mass now.	A. Unchanged from its position when thrown B. At the same depth but slightly shifted horizontally C. Higher in the water column D. Lower in the water column
8	A satellite of mass 'm' is revolving around the earth with an orbital speed 'v'. If mass of the satellite is doubled, its orbital speed will become.	A. Double B. Half C. One fourth D. Remain the same
9	In stable equilibrium the centre of gravity of the body lies.	A. At the highest position B. At any position C. Outside the body D. At the lowest position
10	If a body is at rest or moving with uniform rotational velocity, then torque acting on the body will be.	A. Zero B. Maximum C. Minimum D. Infinite
11	A car drives at steady speed around a perfectly circular track.	A. The car's acceleration is zero B. The net force on the car is zero C. Both the acceleration and net force on the car point inward D. Both the acceleration and net force on the car point outward
12	For an object moving with terminal velocity, its acceleration.	A. First increases then decreases B. Is zero C. Increases with time D. Decreases with time
13	The force that always changes direction of velocity and not its magnitude is called.	A. Electrical force B. Centripetal force C. Gravitational force D. Friction
		A. Short and placed horizontally

14	A tightrope walker is carrying a long pole while walking across a rope. The stability of the walker is affected if the pole is	<p>B. Long and placed horizontally</p> <p>C. Short and placed vertically</p> <p>D. Long and placed vertically</p>
15	A particle is simultaneously acted upon by two forces of 4 and 3 newtons. The net force on the particle is.	<p>A. Between 1 N and 7 N</p> <p>B. 1 N</p> <p>C. 5 N</p> <p>D. 7 N</p>
16	Moment of force is called	<p>A. Couple</p> <p>B. Moment arm</p> <p>C. Torque</p> <p>D. Couple arm</p>
17	A uniformly rotating fan is said to be in	<p>A. Static equilibrium only</p> <p>B. Dynamic equilibrium only</p> <p>C. Both in static and dynamic equilibrium</p> <p>D. Not in equilibrium</p>
18	The reason that a car moving on a horizontal road gets thrown out of the road while taking a turn is.	<p>A. The reaction of ground</p> <p>B. Rolling friction between tyre and road</p> <p>C. Lack of sufficient centripetal force</p> <p>D. Gravitational force</p>
19	The centre of mass of a body	<p>A. Lies always inside the body</p> <p>B. May lie within, outside or on the surface</p> <p>C. Lies always on the surface of the body</p> <p>D. Lies always on the surface of the body.</p>
20	A force F is making an angle of 60° with x -axis. Its y -component is equal to.	<p>A. F</p> <p>B. $F \cos 60^\circ$</p> <p>C. $F \sin 60^\circ$</p> <p>D. $F \tan 60^\circ$</p>