

Force & Pressure **DPP – 1**

1. A force may:

(A) change the state of rest	(C) change the direction of motion
(B) change the state of uniform motion	(D) all of these
2. SI unit of force is:

(A) Dyne	(C) gf
(B) Newton	(D) can't say
3. Force is a:

(A) Vector quantity	(C) Both (A) & (B)
(B) Scalar quantity	(D) None of these
4. On drawing water from a well, a force of _____ is applied on the rope.

(A) pull	(C) push or pull
(B) push	(D) none of these
5. Balanced forces may change of a body :

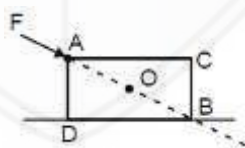
(A) State of rest	(C) Shape or size
(B) State of uniform motion	(D) Direction of motion
6. A minus sign of force implies that the

(A) force is exerted on some other object.	(C) force is in the same direction to that of the motion.
(B) force is in opposite direction to that of the motion.	(D) gravitational force is acting on the object.
7. A body is said to be under balanced forces when the resultant force acting on the body is :

(A) Unity	(C) Infinite
(B) Zero	(D) None of these
8. When a cricket ball strikes the stumps, a force of _____ uproots the stumps.

(A) pull	(C) push or pull
(B) push	(D) can't say
9.forces act on a freely falling body:

(A) Balanced	(C) Both (A) and (B)
(B) Unbalanced	(D) Magnetic
10. Line of action of force is:



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|--------|--------|--------|--------|
| (A) AB | (B) AC | (C) AD | (D) BC |
|--------|--------|--------|--------|
11. Give two examples from everyday life where a force of push is applied and also write about its effect.
 12. Give two examples from everyday life where a force of pull is applied and also write about its effect.
 13. Convert 100 dyne into newton.
 14. A body is moving with velocity 10 m/s and a force of 5N is applied in the direction of motion and two other forces of 3N and 2N are applied opposite to its motion find the acceleration of the moving body.
 15. A force F_1 acting on a body of mass 2 kg produces an acceleration of 2.5 m/s^2 . Other force F_2 acting on another body of mass 5 kg produces an acceleration of 2 m/s^2 . Find the ratio F_2/F_1 .

Force & Pressure

DPP – 2

1. Which of the following is a contact force :

(A) frictional force	(C) electric force
(B) magnetic force	(D) can't say
2. Which of the following is a non-contact force :

(A) magnetic force	(C) impact force
(B) frictional force	(D) none of these
3. A magnet attracting iron pins is an example of :

(A) magnetic force	(C) frictional force
(B) electric force	(D) none of these
4. Which of the following is action at a distance force :

(A) muscular force	(C) magnetic force
(B) frictional force	(D) none of these
5. The force exerted between two object by virtue of their masses is :

(A) magnetic force	(C) gravitational force
(B) electrostatic force	(D) frictional force
6. When Harsh shake hand with Kabeer the kind of force exert between their hands is,

(A) Gravitational force	(C) Electromagnetic force
(B) Weak force	(D) Nuclear force
7. If a rock is brought from the surface of the moon to the earth.

(A) Its mass will change	(C) Both mass and weight will change.
(B) Its weight will change, but not mass.	(D) Its mass and weight will remain the same.
8. 1 dyne is equal to :

(A) 980 g wt	(C) 1/980 g wt
(B) 980 kg wt	(D) None of these
9. A Diwali rocket is ejecting 0.05 kg of gases per second at a velocity of 400 ms⁻¹. The accelerating force on the rocket is :

(A) 20 dyne	(C) 20 kg wt.
(B) 20 Newton	(D) sufficient data not given
10. The pressure of atmosphere on earth is around :

(A) 100 K Pa	(C) 50 K Pa
(B) 0 K Pa	(D) none of these
11. Name any two contact and two non-contact forces.
12. Give reason: In tug of war when two teams pull equally hard, the rope does not move in any direction.
13. Define the weight of a body. Also write its S.I. unit.
14. Force required to lift slowly a 1000 gm mass vertically against gravity of earth.
15. Find the Mass of the body of weight 245N.

Force & Pressure

DPP – 3

1. The SI unit of pressure is :

(A) atmosphere	(C) cm of mercury
(B) pascal	(D) mm of mercury
2. Pressure is defined as :

(A) force	(C) Normal force per unit area
(B) force \times distance	(D) force \times area
3. Pressure cannot be measured in :

(A) Nm^{-2}	(B) bar	(C) Pa	(D) Kg wt
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4. Pascal is the unit of:

(A) force	(C) distance
(B) pressure	(D) area
5. Sharper knives cut fruits easily because:

(A) the area of contact is more	(C) they shine more
(B) the area of contact is less	(D) none of these
6. Women's sandals hurt more than the men's sport shoes because:

(A) women are stronger in health	(C) area of contact of sandal's heel is more
(B) sport shoes have small heel	(D) area of contact of sandal's heel is lesser
7. A camel can walk/run in deserts very easily as compared to horse, donkey etc, because its :

(A) feet are smaller	(C) feet are broader
(B) weight is lesser	(D) body is heavier
8. The atmosphere exerts a pressure P on the surface of earth. Here P is equal to

(A) $1.01 \times 10^5 \text{ Nm}^{-2}$	(C) $1.01 \times 10^7 \text{ Nm}^{-2}$
(B) $1.01 \times 10^{-5} \text{ Nm}^{-2}$	(D) $1.01 \times 10^{-7} \text{ Nm}^{-2}$
9. If you increase the number of books in your school bag:

(A) pressure increases	(C) pressure remains same
(B) pressure decreases	(D) none of these
10. 1 kg wt /m² pressure equals:

(A) 1000 Pascal	(C) 9.8 Pascal
(B) 1 Pascal	(D) 100 Pascal
11. Explain why we prefer to use a sharper knife to cut vegetables and fruits.
12. Tractors have large tyres, bull dozers have caterpillar tracks and heavy buses and trucks have eight rear wheels. Give one reason common to all these.
13. Define pressure. What is the SI unit of pressure?
14. Explain why a school bag with a broader strip causes less pain than the bag with a narrow strip on the shoulder
15. Explain why is it easy to fix a sharp nail than a blunt nail in a wall.

Force & Pressure

DPP – 4

1. Atmospheric pressure on the earth is unable to crush humans because :
 - (A) humans are the most powerful living beings on the earth
 - (B) pressure exerted from the inside of body cells is less than atmospheric pressure there
 - (C) pressure exerted from the inside of body cells is more than atmospheric pressure there
 - (D) pressure exerted from the inside of body cells equals the atmospheric pressure there
2. The vacuum cleaner can suck dust and paper pieces because :
 - (A) the air inside the collecting bag is sucked out by an electric motor
 - (B) there is a magnet like substance inside it which attracts the dust and paper
 - (C) the electric current flowing in the device makes dust particles stick to it
 - (D) none of these
3. When we suck a cold drink through a straw :
 - (A) cold drink sticks to the straw and climbs to our mouth
 - (B) we suck some air present in the straw, which lowers the pressure of air there as compared to outside
 - (C) we push some air in the straw so as to increase the air pressure in the straw
 - (D) none of these
4. Atmospheric pressure is greatest on :

(A) 100 m ² area of earth	(C) is zero everywhere
(B) 10 m ² area of earth	(D) independent of area of earth
5. At sea level, the air pressure is equal to:

(A) 300 mm of mercury column	(C) 100 mm of mercury column
(B) 760 mm of mercury column	(D) 5 mm of mercury column
6. Pascal law tells us about the:

(A) Pressure of a gas	(C) Pressure of a liquid
(B) Pressure of a solid	(D) Force on a liquid
7. Blood pressure can be measured by:

(A) thermometer	(C) speedometer
(B) sphygmomanometer	(D) odometer
8. Atmospheric pressure depends upon :

(A) Density of air	(C) Height of measurement point
(B) Temperature of air	(D) All of the above
9. On higher altitudes a fountain pen starts leaking because the air inside the ink tube of the pen is at a:

(A) lower pressure than the air outside	(C) pressure equal to air outside
(B) higher pressure than air outside	(D) none of these
10. Blood contains dissolved oxygen at a pressure which is:

(A) > atmospheric pressure	(C) = atmospheric pressure
(B) < atmospheric pressure	(D) zero
11. Atmospheric pressure is the pressure exerted by..... on the earth.
12. Write the definition of atmospheric pressure. Explain it with the help of an example.
13. Why a heated tin can gets crushed when fitted with a stopper and cooled?
14. How does the human body withstand atmospheric pressure?
15. Why do astronauts wear space suits?