

ANSWERS:-

Worksheet

1. Name the term used for liquid friction.

Viscosity.

2. Define static friction.

Friction which comes into play before a body begins to move a slide over another body which has the greatest possible value for all fractions

3. Give two uses of friction

Friction is used for gripping and holding objects

Knots in strings can be tied because there is friction.

4. When a force is applied to a body in the same direction what are the changes observed?

The speed of the object increases.

5. What is the speed of the body when it is in the state of rest?

The speed of the body is zero.

6. Define friction.

Friction is defined as the opposing force which comes into play whenever there is relative motion between two bodies.

7. Why does force not affect the mass of a body?

Force is an inherent property of a body.

8. if more than two forces act on a body that the net force acting on the body is obtained by what method?

The net force is obtained by the vector sum of all the forces.

_A.1) We know that friction causes damage of the material and energy and generates harmful heat and sound but friction is also useful and very necessary in many ways. It is used in gripping and

holding the object with our hands and climbing a ladder or tree.

It helps in walking, running, writing etc. So it is a necessary evil.

2) Friction decreases the efficiency of the machine as a part of machines energy is lost in overcoming the friction.

4) When a force is applied to a body in the same direction, its speed increases and when a force is applied to a body in the opposite direction, its speed decreases.

5) Net force = $50\text{N} - 30\text{N} = 20\text{N}$ towards east.

6) The direction of force determines the direction of motion. The body moves in the direction of force applied.

7) Force is called a vector quantity because it has both magnitude and direction.

B. 1) Friction- It is defined as the opposing force, which comes into play whenever there is relative motion between two bodies.

Different types of friction:-

(See page no. 36)

2) Desirable factors of Friction:-

- It is necessary in walking and running.
- It is used in gripping, holding objects with our hands, climbing a ladder.
- It helps in writing.

- It holds the nuts and bolts together.

Undesirable factors of friction:-

- It is responsible for wear and tear of various parts of machines.
- It decreases the efficiency of machines
- A lot of energy is wasted in overcoming friction.

3) E.g. of push (a) pushing a loaded cart.(b) pushing a chair

E.g. of pull (a) pulling the string of a curtain in theatres.(b) pulling out the drawer.

c. 1). c

2). b

3). c

4). b

5). a

6). d

D. 1) position , speed

2) vector.

3) opposing , relative

4) conservative

5) sliding friction

6) necessary

E. Define- (See pageno.36)

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F. 1) true

2) true

3) false

4) true

5) true 6) false

7) false

8) false

G.1) mass

___ 2) fuel

consumption

3) a cricket ball

hit by a

Batsman.

H. 1). d 2). a

3). c.

4). b .

I. 1) friction

2) rolling friction

3) mass

4) force