KALPAVRUKSHA MODEL SCHOOL

Answers of Assignments-6

Class: VIII Sub: Physics Date: 13.08.2021

Topic: FORCE AND FRICTION

I. Answers:

1. **Explain why sportsmen use shoes with spikes.**
   ANS: spikes are provided in the shoes of players and athletes to increase friction and prevent slipping. Spikes are the pointed nails which get into ground and increase friction between shoe and the ground.

2. **List out the methods to reduce friction.**
   ANS: Methods of minimizing friction are
   a) By using a suitable lubricant, like oil (for light machinery) or grease (for heavy machinery). This helps because fluid friction is less than solid friction.
   b) By using wheels and ball bearings

3. **List out the methods to increase friction.**
   ANS: Methods of increasing friction are
   a) By making the moving surfaces rough, e.g. tyres have designs and patterns with grooves on the surface to increase resistance with the road. This prevents slipping of the tyres on a wet road.
   b) Sand and gravel is strewn on slippery ground during the rainy season to increase friction. It is then easier to walk on the ground.

4. **If several forces act on a body in different directions, in which direction would the body move?**
   ANS: If several forces act on a body in different directions, the effect on the body will be due to the magnitude and direction of the net force acting on it. So the body will move in the direction of the resultant force.

5. **Fill in the blanks:**
   (a) Sprinkling of powder on the carom board **REDUCE** friction.
   (b) Ball bearings reduce friction because they **ROLL** rather than slide.

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6. **Differentiate between rolling and sliding friction.**

ANS:

Sliding friction	**Rolling friction**
1. When the surface of one body is sliding against the surface of another body, sliding friction comes into play.	1. When the surface of one body is rolling against the surface of another body, rolling friction comes into play.
2.Sliding friction occurs due to interlocking between microscopic bumps on surfaces	2.Rolling friction occurs due to deformation of surfaces

II.CHOOSE THE CORRECT ANSWERS:

1. Which of the following change appreciably when a batsman hits a moving cricket ball?

A. shape B. direction C. size D. speed

a. A and B b. B and C

c. A and C d. B and D

ANS: d. B and D

2. Which of the following is not an effect of force?

a. a force can move a stationary object.

b. a force can stop a moving object

c. a force can change the speed of a moving object

d. a force can change the composition of a moving object

ANS: d. a force can change the composition of a moving object

3. If we take a light spring balance and stretched it at both the ends with our hand, then the shape and size of its length _____.

a. increases b. remain same c. can't say

d.decreases

ANS: a. increases

4. A push or pull on an object is called _____.

a. friction

b. action

c. force

d. magnitude

ANS: c. force

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