

St. Andrews Scots Sr. Sec. School

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Session 2022-2023 - Worksheet

Class: VIII

Subject: Science

Topic: Friction

Worksheet No:10

Q.1. Fill in the blanks:

- Bodies of birds, fishes and ships are _____.
- Friction can also produce _____.
- All objects moving in fluids have _____ shape to reduce _____.
- Rough surfaces produce _____ friction than smooth surfaces.
- In many machines, friction is reduced by using _____.

Q.2. Write True or False against each statement:

- Friction is independent of the nature of surfaces in contact.
- A spring balance measures force.
- Friction can be reduced by using ball bearings in some machines.
- Friction can never be eliminated.
- Friction do not produce heat.

Q.3. Match the following:

| Column I | Column II |
|-----------------------|------------------------|
| 1. Fluid friction | (a) Due to friction |
| 2. Lubricants | (b) Streamlined |
| 3. Wheels | (c) Increases friction |
| 4. Spring balance | (d) Drag |
| 5. Shape of aeroplane | (e) Rolling friction |
| 6. Rough surface | (f) Reduce friction |
| 7. Heat generation | (g) Measures force |

Q.4. Multiple choice questions:

- Friction is a
 - non-contact force
 - contact force

- (iii) magnetic force
- (iv) electrostatic force

b) Which of the following produces least friction?

- (i) Sliding friction
- (ii) Rolling friction
- (iii) Composite friction
- (iv) Static friction

c) Friction always

- (i) opposes the motion
- (ii) helps the motion
- (iii) both (a) and (b)
- (iv) none of these

d) Friction can be reduced by using

- (i) oil
- (ii) grease
- (iii) powder
- (iv) all of these

e) Static friction is less than

- (i) sliding friction
- (ii) rolling friction
- (iii) both (a) and (b)
- (iv) none of these

Q.5. Answer the following questions:

- a) If we push the book on the table, it stops after sometime. Why?
- b) How does the friction depend on the nature of the surface?
- c) When the two surfaces are pressed harder, friction increases. Explain why?
- d) The sliding friction is slightly smaller than the static friction. Explain why?
- e) What do you mean by fluid friction? How can fluid friction be reduced?