

Understanding Friction

Physics · Practice Test · 23 Questions

1. What causes friction between two surfaces in contact?

- A) The smoothness of the surfaces
- B) The interlocking of tiny hills and valleys on the surfaces
- C) The applied force
- D) The weight of the object

2. Which of the following is an example of friction opposing motion?

- A) A ball rolling on the ground and coming to rest
- B) A car moving forward
- C) A person pushing a wall
- D) A magnet attracting a metal object

3. What is the opposing force that comes into play when an object tends to move but does not start moving?

- A) Kinetic friction
- B) Sliding friction
- C) Static friction
- D) Rolling friction

4. What is the maximum value of static friction called?

- A) Kinetic friction
- B) Limiting friction
- C) Sliding friction
- D) Rolling friction

5. When an object is actually moving over the surface of another object, what type of friction is acting?

- A) Static friction
- B) Limiting friction
- C) Kinetic friction
- D) Fluid friction

6. What are the two types of kinetic friction?

- A) Static and limiting friction
- B) Sliding friction and rolling friction
- C) Fluid friction and air friction
- D) Surface friction and internal friction

7. Which type of friction is generally less: sliding friction or rolling friction?

- A) Sliding friction
- B) Rolling friction
- C) They are equal
- D) It depends on the surface

8. What device is used to measure the force of friction?

- A) Thermometer
- B) Barometer
- C) Spring balance
- D) Magnifying glass

9. Which factor influences the force of friction?

- A) The color of the surfaces
- B) The temperature of the surfaces
- C) The nature of the surfaces in contact
- D) The time of day

10. How does the weight of an object affect friction on a horizontal surface?

- A) More weight means less friction
- B) More weight means more friction
- C) Weight has no effect on friction
- D) Weight only affects static friction

11. What is fluid friction?

- A) Friction between solid surfaces
- B) Friction exerted by liquids and gases on moving objects
- C) Friction caused by air resistance
- D) Friction experienced by a rolling object

12. Why are the bodies of fishes and birds streamlined?

- A) To increase friction
- B) To decrease friction with water or air
- C) To make them float
- D) To make them more visible

13. Which of the following is an advantage of friction?

- A) It causes wear and tear
- B) It leads to loss of energy
- C) It helps us to walk
- D) It generates heat

14. How can friction be increased?

- A) By polishing the surfaces
- B) By making the surfaces rough
- C) By using lubricants
- D) By using rollers

15. What is the purpose of making grooves in the tires of vehicles?

- A) To decrease friction
- B) To increase friction for better grip
- C) To make the tires lighter
- D) To reduce fuel consumption

16. What are lubricants?

- A) Substances that increase friction
- B) Substances that decrease friction
- C) Substances that increase wear and tear
- D) Substances that generate heat

17. Which of the following is a dry lubricant?

- A) Grease
- B) Oil
- C) Talcum powder
- D) Water

18. How do ball bearings reduce friction?

- A) By increasing surface roughness
- B) By converting sliding friction into rolling friction
- C) By creating more interlocking
- D) By applying a lubricant

19. Why is friction considered a 'necessary evil'?

- A) Because it is always harmful
- B) Because it is always beneficial
- C) Because it has both useful and harmful effects
- D) Because it cannot be controlled

20. What happens when a matchstick is struck against a rough surface?

- A) It becomes smoother
- B) The friction raises its temperature to ignite
- C) It slides easily
- D) It creates less heat

21. The interlocking of two surfaces opposes the:

- A) Weight of the object
- B) Applied force
- C) Motion of one object over another
- D) Surface area

22. Rough surfaces have _____ friction compared to smooth surfaces.

- A) less
- B) more
- C) equal
- D) no

23. When you stop pedaling a bicycle, it slows down due to:

- A) Inertia
- B) Gravity
- C) Friction
- D) Air resistance