

PHYSICS

BOOKS - MBD -HARYANA BOARD

FRICTION

Example

1. Fill in the following blanks with suitable words:

Friction always opposes.....between the surface in contact with each other. Watch Video Solution **2.** Friction depends on the of surfaces. **Watch Video Solution**

3. State true/false

Friction produces sound.



4. State true or false

Sprinkling of powder on the carrom board increases friction.



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5. State true or false

Sliding friction is less than the static friction.



6. Four children were asked to arrange forces due to rolling, static and sliding frictions in increasing order. Their arrangements are given below. Choose the correct arrangement.

A. rolling, static, sliding

B. rolling, slinding, static

C. static, sliding, rolling

D. sliding, static, rolling.

Answer:



7. Alida runs her toy car on dry marble floor, wet marble floor, newspaper and towel spread on the floor. The force of friction acting on the car on different surfaces in increasing orderwill be

A. wet marble floor, dry marble floor, newspaper and towel

B. newspaper, towel, dry marble floor, wet marble floor.

C. towel, newspaper, dry marble floor, wet marble floor.

D. wet marble floor, dry marble floor, towel, newspaper.

Answer:



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8. Suppose your writing desk is tilted a little. A book kept on it starts sliding down. Show the direction of frictional force acting on it.



9. You spill a bucket of soapy water on a marble floor accidentally. Would it make easier or more difficult for you to walk on the floor? Why?



10. Explain why sportsmen use shoes with spikes.

11. Iqbal has to push a lighter box and Seema has to push a similar heavier box on the same floor. Iqbal will have to apply a larger force. State true or false with reasons.



12. Explain why kinetic friction is less than static friction.



13. Friction is both a friend and a foe. Why do you think so? Give examples to support your answer.



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14. Objects moving in fluids must have special shapes. Name this shape.



- 15. While pushing a heavy box from one place to another in his house, Naresh noticed that it was difficult to take a stationary box from its resting position to moving position but it was easy to move that box with that speed. Why was it so?
 - A. Sliding friction is less than static friction
 - B. Static friction is less than sliding friction
 - C. The weight of the box decreases
 - D. None of the above

Answer:



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16. The moving ball on the floor stops after some time because of.......

A. magnetic force

B. electrostatic force

C. frictional force

D. Both electrostatic force and frictional force.

Answer:



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17. It is difficult to walk on wet floor because:

A. Frictional force increases

B. Frictional force decreases

C. sometimes frictional force increases

D. it is impossible to apply more muscular force

Answer:



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18. You move a stone of glass on the cemented floor, marble floor, water, towel and on ice. The force of friction acting on the different surfaces in increasing orde3r will be:

A. cemented floor, water, towel, marble floor, ice

B. marble floor, cemented floor, water, ice, towel

C. ice, water, marble, towel, cemented floor

D. water, ice, mrble, cemented floor, towel

Answer:



19. Static friction works when:

A. an attempt is made to bring an object from motion to rest form

B. an attempt is made to bring an object from rest form to motion

C. we do not want to bring any change in the situation of an object

D. none of the above

Answer:

20. Rolling friction is:

A. more than static friction

B. equal to static friction

C. less than static friction

D. sometimes more than static friction and

sometimes less than static friction.

Answer:

21. Four children were asked to arrange forces due to rolling, static and sliding friction in a dreasing order. The correct arrangement is :

A. rolling, static, sliding

B. rolling, silding, static

C. static, sliding, rolling

D. sliding, static, rolling

Answer:

22. Alida runs her car on the dry matble floor, wet marble floor, newspaper and towel spread on the floor. The force of friction acting on the car on different surfaces in decreasing order will be

A. wet marble floor, dry marble floor, newspaper and towel

- B. newspaper, towel, dry marble floor, wet marble floor.
- C. towel, newspaper, dry marble floor, wet marble floor.
- D. wet marble floor, dry marble floor, towel, newspaper.

Answer:



23. In which direction the force of friction acts? What if object does not move?



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24. Why is it difficult to move a bike with its brakes on ?



25. Why a roling ball stops after some time? What happens to its cause when it completely stops?



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26. What is friction? In which direction does it apply?



27. Wheels are made circular. Why?



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28. Friction is a self adjusting force.



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29. Which is more smooth: wet muddy or cemented floor?



30. What is the spring balance?



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31. A horse pulling a cart has to apply a greater force to start the cart than to keep the cart in motion Why?



32. Give some examples of force of friction.



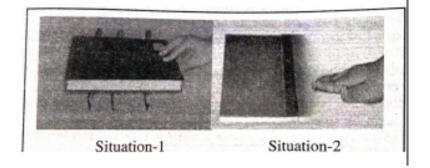
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33. Friction and Kinetic Friction



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34. Out of the given two situations, which one will be easy to push the object and why?





35. Define friction. What is the cause of friction? Give factors affecting friction. Explain that friction is necessary evil.



36. What is force of limiting friction and sliding friction?

