



BAL BHARATI PUBLIC SCHOOL, PITAMPURA

CLASS 8

PHYSICS (FRICTION)

ASSIGNMENT BASED ON 'FRICTION'

- 1 Explain Why, it is easier to drag a mat on floor when nobody is sitting on it but much more difficult to drag the same mat when a person is sitting on it.
- 2 What are the factors affecting friction? Explain with examples.
- 3 What is the cause of friction? Explain with the help of labeled diagram.
- 4 Which type of surfaces produce {a} least friction, and {b} too much friction?
- 5 What is the direction of force of friction acting on a moving object?
- 6 A car is moving towards North. What will be the direction of force of friction acting on this car due to surface of road?
- 7 When a pencil cell is released from a certain point on an inclined wooden board, it travels a distance of 35 cm on floor A before it comes to rest. When the same pencil cell is released from the same point on the same inclined board, it travels a distance of 20 cm on floor B before coming to rest. Which floor, A or B, offers greater friction? Give reason for your answer.
- 8 What kind of friction comes into play:
 - (a) When a block of wood kept on table moves slowly?
 - (b) When a block of wood kept on table just tends to move (or slip)
 - (c) When a block of wood kept on cylindrical iron rods moves?
- 9 Out of sliding friction, static friction & rolling friction:
 - (a) Which one is the smallest?
 - (b) Which one is the largest?
- 10 Explain why, sliding friction is less than static friction.
- 11 What is meant by 'rolling friction'?
- 12 Why does a man slip when he steps on a banana peel thrown on the road?
- 13 Explain why:
 - (a) a pencil will write on paper but not on glass
 - (b) The handles of motor cycle are covered with a rubber sheet with spikes.

- (c) The soles of our shoes wear out gradually.
 - (d) Tyres of car wear out gradually.
- 14 Why does a matchstick light when we strike it on a rough surface?
 - 15 Why do brake pads of bicycles have to be replaced quite often?
 - 16 What prevents you from slipping every time you take a step forward?
 - 17 What happens when you rub your hands vigorously for a few seconds? Why does this happen?
 - 18 What enables us to fix a nail in a wall & knot to be tied?
 - 19 How does bicycle stop when its brakes are applied?
 - 20 What makes the steps of foot over-bridges at Railway stations to wear out slowly?
 - 21 State two advantages & two disadvantages of friction.
 - 22 Why do gymnasts apply a coarse substance to their hands?
 - 23 Why do kabaddi players rub their hands with dry soil?
 - 24 Why are grooves provided in the soles of shoes?
 - 25 Why are treads made in the surface of tyres?
 - 26 Explain why, oil or grease is applied to those parts of machine which are in motion.
 - 27 Fill in the blanks:
 - (a) Sprinkling of powder on the carom board Friction.
 - (b) Ball bearings reduce friction because theyrather than slide.
 - 28 Two men tried to push a heavy box & could succeed. Finally wheels were fitted to the box & now a single man could move it. Justify.
 - 29 What is the special name of frictional force exerted by fluids (like air or water)?
 - 30 What are the factors that affect the fluid friction?
 - 31 What is the name of 'special shape' which is given to objects moving through fluids to reduce drag?
 - 32 Why are cars, airplanes & rockets streamlined?