

Physics

1. Which changes can occur when you add heat?
A. The water can change from a solid to a liquid
2. What is sublimation?
A. The process by which a solid changes directly into ^{gas} gas.
3. Evaporation is when a substance changes from a liquid to a gas (or vapor) naturally.
4. What are states of matter?
A. The physical forms in which a substance can exist includes solid, liquid, gas and plasma
5. Force changes - all of these.
6. Which of the following is responsible for wearing out of bicycle tyres? - Frictional force.
7. Force of friction depends on - all of these
8. A toy car rolled with the same initial speed will travel farther on - Polishing marble surface
9. Friction is a - contact force
10. Which of the following produces least friction.
Rolling friction

Fillup

11. Force has to be applied to change the ~~of~~ a moving object.
12. When an elephant drags a wooden log over the sand the forces that are applied on it.
13. A ball was set rolling on a table. If its motion is to be changed a force will have to be applied on it.
14. The force of friction always acts against the motion.

15. One or more forces are acting in the following situations:
- (a) An object falling from a tall building - Gravitational force
 - (b) An aeroplane flying in sky = Mechanical force
 - (c) Squeezing sugarcane Juice with a squeezer = Muscular force
 - (d) Winnowing food grain = Muscular force

16. i. 10 quintal = 1 metric ton.

ii. 1 cm = 0.01 metre

iii. 1 mm = 0.001 metre

iv. 1 yard = 3 ft.

v. 1 decimeter = 0.1 meter.

vi. 1 decimeter = 10 meter

vii. 1 hectometer = 100 meter

viii. 1 gram = 0.001 kg

ix. 1 mg = 0.000001 kg

x. 1 lb = 453.59 g.

k. 1 h = 3600 s

l. 1 y = 31536000 s

m. 1 d = 86400 s.

n. 1 deca meter² = 100 m²

o. 1 hectare = 10000 m²

p. 1 km² = 10⁶ m²

q. 1 dm² = 100 cm²

r. 1 cm² = 10⁻⁴ m²

s. 1 mm² = 10⁻⁶ m²

t. 1 square yard = 0.84 m²

u. 1 square ft = 0.0929 m²

v. 1 acre = 4046.86 m².

2. 171. Friction opposes motion:

1. Friction always acts in a direction opposite to the direction of motion.
2. Friction produces heat. It is very common.
3. Friction causes wear and tear.

18. The frictional force between two bodies depends mainly on three factors: (i) The adhesion between body surfaces (ii) roughness of the surface. (iii) deformation of bodies. (d)

19a define static friction

19. Static friction - Suppose we want to slide an object on a surface we apply a force as push. Sliding friction - when the body begins to slide to object. Rolling friction: when an object rolls is known as Rolling friction.

20. Friction opposes the motion of a body so it decreases the efficiency more force is needed to move a body.

2. Friction causes wear and tear in the moving parts.

3. Friction produces heat.

21. On rubbing the match stick in the rough surface, the friction converts this work into heat.

22. The soles of our shoes get worn out after a period of time due to the effect of friction.

23.

i. 12 inch = Ft = 1

ii. 1 Ft = cm 30.48

iii. 20cm = m 0.2

iv. 4.2 m = cm = 420

v. 0.2 km = m = 200

vi. 0.2 cm = mm = 2

vii. 1 yard = m = 0.91 m

24. i. Applied force - is a force that is applied to an object by a person or another object.

2. Tension - In physics tension is described as the pulling force transmitted axially by the means of a string, a cable, or a rod element.

3 Friction - when we roll a ball on the ground, it goes up to a certain distance with the decreasing speed and then it finally stops is called frictional force

25A	Solid	Liquid	gas
	Solid have a fixed shape and fixed volume.	Liquids have a fixed volume but not fixed shape	Gas have neither a fixed volume nor a fixed shape.

Solid cannot be compressed.

Liquids can be compressed.

Gases can be

Large pressure compress them.

Compress easily

Solids have high density

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Gases have least density among the three.

The force of attraction between the particles is very strong.

They have considerable space between the particles.

The space between gas particles is large.

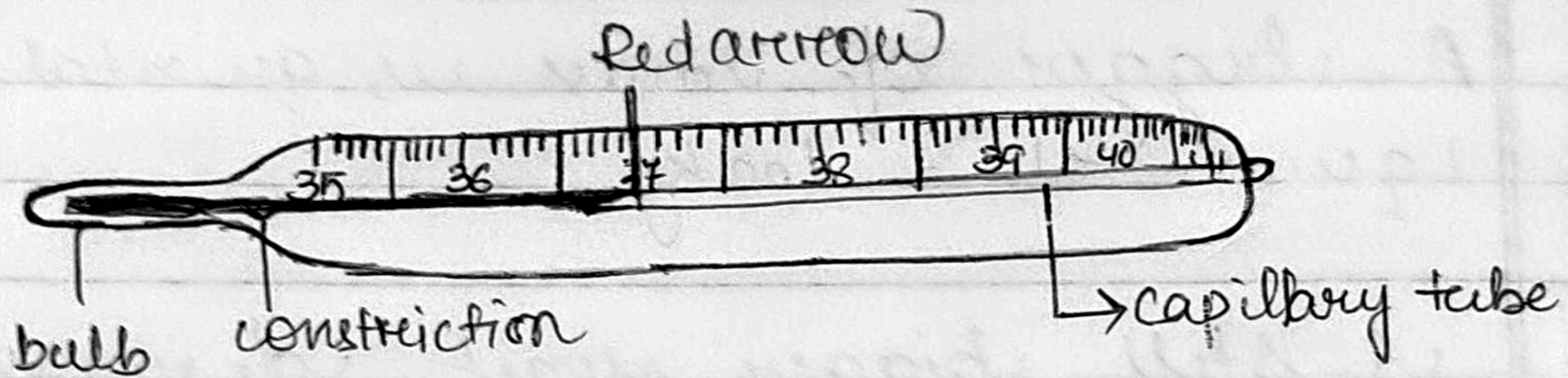
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21. What is a clinical thermometer? State its special features. Draw a neat labelled diagram of clinical thermometer showing the range of temperature mark on it.

A clinical thermometer has marking from 35°C to 42° . It has slight bend or kink in the stem just above the bulb. The kink is called constriction. This constriction prevents the mercury from falling back by itself. The temperature is held

temperature of a ~~fit~~ healthy person is 37°C . This temperature is marked by a red arrow.

→ Doctors use a special thermometer called the clinical thermometer for measuring the temperature of a patient's body.



Clinical Thermometer.

Fillup

1. The S.I unit of length of two sides is Meter of time is second of mass is temperature.
2. $^{\circ}\text{C}$ is the unit of 1000.
3. The zero mark in celsius thermometer is the melting point of Ice.

Fill up.

4. 1 Metric tonne = 1000 kg

5. The thermometer used to measure the human body temperature is called the clinical thermometer.

6. The normal temperature of human body is 37 °C to 98.6 °F.

34. The particles of potassium permanganate and water mix on their own without any stirring. Two conclusions can be drawn from the phenomenon. These are:

1. Potassium permanganate and water are made up of very tiny particles -

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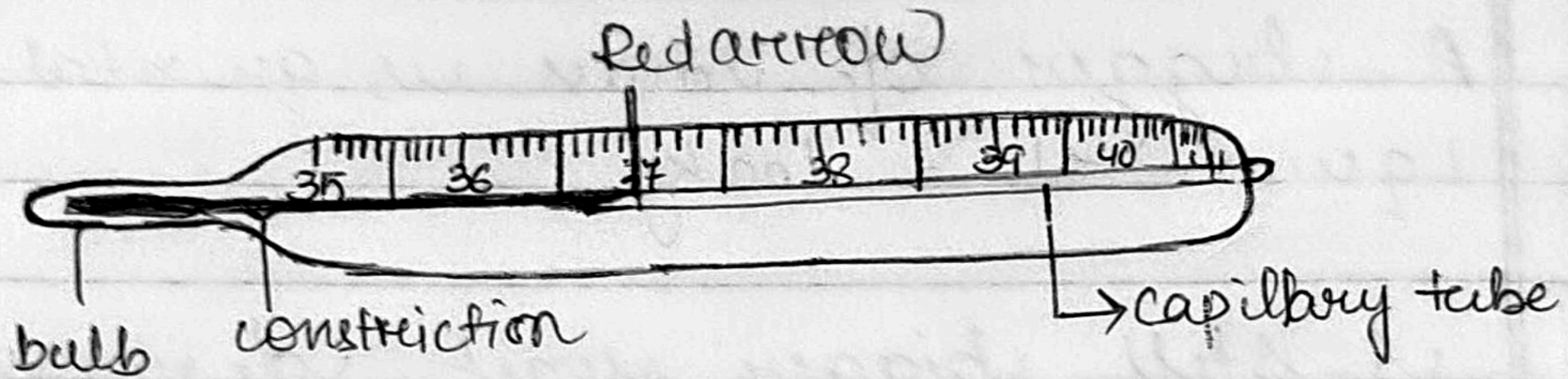
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