

12) Why do Kabaddi players rub their hands with soil?

Ans to avoid slipping.

17/02/  
HHW

REVISION WORKSHEET  
PHYSICS

Multiple choice questions.

1) Which change can occur when you add heat energy to water?

a) The water can change from a liquid to a gas.

2) What is sublimation?

a) The process by which a solid changes directly into gas.

3) Evaporation is when

a) a substance changes from a liquid to a gas (or vapour) naturally.

4) What are states of matter?  
Ans: a) The physical forms.

in which a substance exists. It includes solid, liquid, gas and plasma.

5.) Force changes...

- a) motion of body      b) speed of body  
c) shape of body      d) all of these

6.) Which of the following is responsible for wearing out of bicycle tyres?

c.) Frictional force.

7.) Force of friction depends on...

- a) roughness of surface.      b) smoothness of surface  
c) inclination of surface  
d) all of these.

8.) A toy car released with same initial speed will travel farthest on...

b) polished marble surface.

9.) Friction is a...

b) contact force.

10.) Which of the following produces least friction?

b) Rolling friction



11.) Force has to be applied to change the direction of a moving object.

12.) When an elephant drags a wooden log over land, the forces that are applied on the log are muscular force, Gravitational force and frictional force.

13.) A ball was set rolling on a large 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~~ forces are acting ~~in~~ the following examples, Name them.

- a) An object falling from a tall building. Gravitational force and mechanical force.
- b) An ~~object~~ <sup>airplane</sup> flying in the sky. Gravitational force and frictional force.

g) Squeezing sugarcane ~~with~~ Juice  
 with a squeezer. Force of squeezer  
muscular force, (Contact force)

d) Winnowing food grain - ~~muscular~~ muscular  
force, gravitational force

16) Convert the following quantities  
 as indicated

a) 10 quintal = 1 metric ton

b) 1 cm = 10<sup>-2</sup> metre

c) 1 mm = 10<sup>-3</sup> metre

d) 1 yard = 3 ft

e) 1 decimetre = 10<sup>-1</sup> metre

f) 1 dekametre = 10<sup>1</sup> metre

g) 1 hectometre = 100 metre

h) 1 gram = 10<sup>-3</sup> kg

i) 1 mg = 10<sup>-6</sup> kg

ii) 1 lb = 4.5359 kg

iii) 1 h = 3600 s

iv) 1 year = 3.15 × 10<sup>7</sup> s

v) 1 day = 86400 s



- 1) 1 decametre<sup>2</sup> =  $10^2$  m<sup>2</sup>.
- 2) 1 hectare =  $10000$  m<sup>2</sup>.
- 3) 1 km<sup>2</sup> =  $10,00,000$  m<sup>2</sup>.
- 4) 1 dm<sup>2</sup> =  $100$  cm<sup>2</sup>.
- 5) 1 cm<sup>2</sup> =  $10^{-4}$  m<sup>2</sup>.
- 6) 1 mm<sup>2</sup> =  $10^{-6}$  m<sup>2</sup>.
- 7) 1 square yard =  $0.836$  m<sup>2</sup>.
- 8) 1 square ft =  $0.092903$  m<sup>2</sup>.
- 9) 1 acre =  $4046.856$  m<sup>2</sup>.

17) What are the effects of friction?

- 1) Friction opposes motion.
- 2) Friction always acts in a direction opposite to the direction of motion.
- 3) Friction produces heat.
- 4) Friction causes wear and tear.
- 18) What are the factors which affect force of friction and how?
- 1) The smoothness of the surface. The force of friction is more between rough surfaces and less between smooth surfaces.

2) The nature of medium in which the body moves :- A solid liquid or gas, all ~~are~~ the force of friction on a moving body.

3) The weight of the moving body on the surface. Greater the weight more is the force of friction on the body by the surface.

19) Define static friction, sliding friction & rolling friction.

Static friction - Static friction is a force that hinders the movement of an object moving along the path.

Sliding friction - The friction between two bodies that are in sliding contact.

Rolling friction - The force on a surface due to motion between two bodies that are in sliding.



20) What are the disadvantages of friction?

1) Friction opposes the motion of a body it decreases,

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

3) Friction produces heat.

21) Why does a match stick catch fire when rubbed on the rough surface of the box?

Ans) Matchstick catch fire when rubbed on the rough surface of the box because of friction. Thus, friction produces heat.

22) The sole of shoes get

worn after some time. Explain. The shoes worn after some time due to friction between the shoes and the surface. Thus friction causes wear and tear.

↳ Convert the following quantities as indicated

a)  $12 \text{ inch} = 1 \text{ ft}$

b)  $1 \text{ ft} = 30.48 \text{ cm}$

c)  $20 \text{ cm} = 0.2 \text{ m}$

d)  $4.2 \text{ m} = 420 \text{ cm}$

e)  $0.2 \text{ km} = 200 \text{ m}$

f)  $0.2 \text{ cm} = 2 \text{ mm}$

g)  $1 \text{ yard} = 0.9144 \text{ m}$

24.1 Define -

Applied force = Force that is applied to an object by a person or another object.

Tension = Force developed in a rope, string or cable when stretched under an applied force.

Frictional force - opposite force that is created between two surfaces that try to move in the same direction or opposite direction. It is small to move in opposite direction.



25) Compare properties of solids, liquids and gases.

	Solids	Liquids	Gases
Shape	Definite	Acquires the shape of the container.	Acquires the shape of the container.
Volume	Definite	Definite	Indefinite, acquires the volume of the container.
Fluidity	Not possible	Can flow	Can flow

26) Most substances can change from one state to another under different conditions of temperature and pressure. Explain with examples.

Ans) The heat energy absorbed by the substance increases the amplitude of vibrations and they become free to move.

Ex: - when a butter is heated it melts.

The heat energy absorbed by a substance in liquid state increases the energy of its molecules and changes into gas. Ex

When water is heated it becomes water vapour.

27: why?

a) Machines are oiled from time to time.

Ans) to avoid the tools to become less and reduce friction.

b) An object is thrown upwards (comes down) after reaching a point.

Ans) Due to gravitational force.

c) Powder is sprinkled on a carrom board.

Ans) to reduce the friction between the carrom board and the balls.



28) Explain increasing and decreasing friction with suitable examples.

Ans) Increasing friction means to make the friction more. Ex - a) By making surfaces smooth

b) By use of lubricants

Decreasing friction means to reduce friction. Ex - a) By making the surfaces rough

b) By using dry surfaces.

29) Cartilage is present in and decreases friction with suitable example. Joints of our body, which are

in them, smooth.

Ans) ~~if~~ we will not be able to work properly. Our joints will get wear and tear. ~~we~~ and we will not be able to work.

30) Define "mass" state its

(i) SI units. (ii) CGS units and (iii) FPS units. How are they related?

And in 1889, one kilogram was defined as the mass of a cylinder of platinum-iridium alloy kept at the international Bureau of Weights and Measures at Sevres near Paris.

The mass of 1 = 1000 ml of water at 4°C is taken as 1 kilogram.

S.I. unit = kilogram = kg

in C.G.S. = gram = g

in F.P.S. = pound = lb

$$1 \text{ kg} = 1000 \text{ g}$$

$$1 \text{ lb} = 453.59 \text{ g}$$

$$1 \text{ g} = \frac{1}{1000} \text{ kg} = 10^{-3} \text{ kg}$$



31) Convert the following quantities as indicated:

a)  $200 \text{ kg} = \underline{0.2}$  metric tonne.

b)  $150 \text{ kg} = \underline{1.5}$  quintal.

c)  $10 \text{ lb} = \underline{4.535}$  kg.

d)  $250 \text{ g} = \underline{0.25}$  kg.

e)  $0.01 \text{ kg} = \underline{10}$  g.

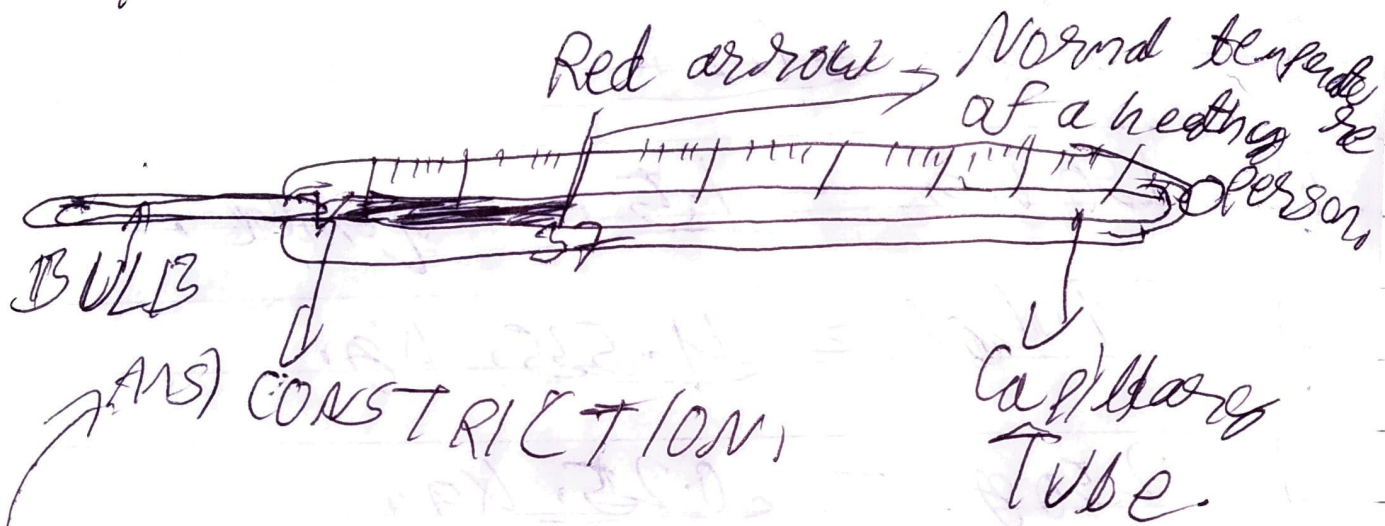
f)  $5 \text{ mg} = \underline{5 \times 10^{-6}}$  kg.

32) What is a clinical thermometer?  
Ans: A clinical thermometer is a thermometer that doctors use to measure the temperature of a patient's body.

Ans: State its special feature.  
It has a ~~mercury~~ <sup>fine</sup> stem from slight bend or constriction in the stem just above the bulb. The constriction is called.



Draw a labeled neat diagram of a clinical thermometer showing the range of temperature marked on it.



What is the normal temperature of the human body? — Ans)  $37^{\circ}\text{C}$  OR  $98.6^{\circ}\text{F}$ .

How is it indicated in a clinical thermometer? — Ans)  $37^{\circ}\text{C}$

33) Fill in the blanks.

a) The S.I. unit of length is metre and of time is second and of mass is kg.

b)  $^{\circ}\text{C}$  is the unit of temperature.

c) 1 metric tonne = 10 quintal = 1000 kg.

d) The zero mark in Celsius thermometer is the melting point of ice.



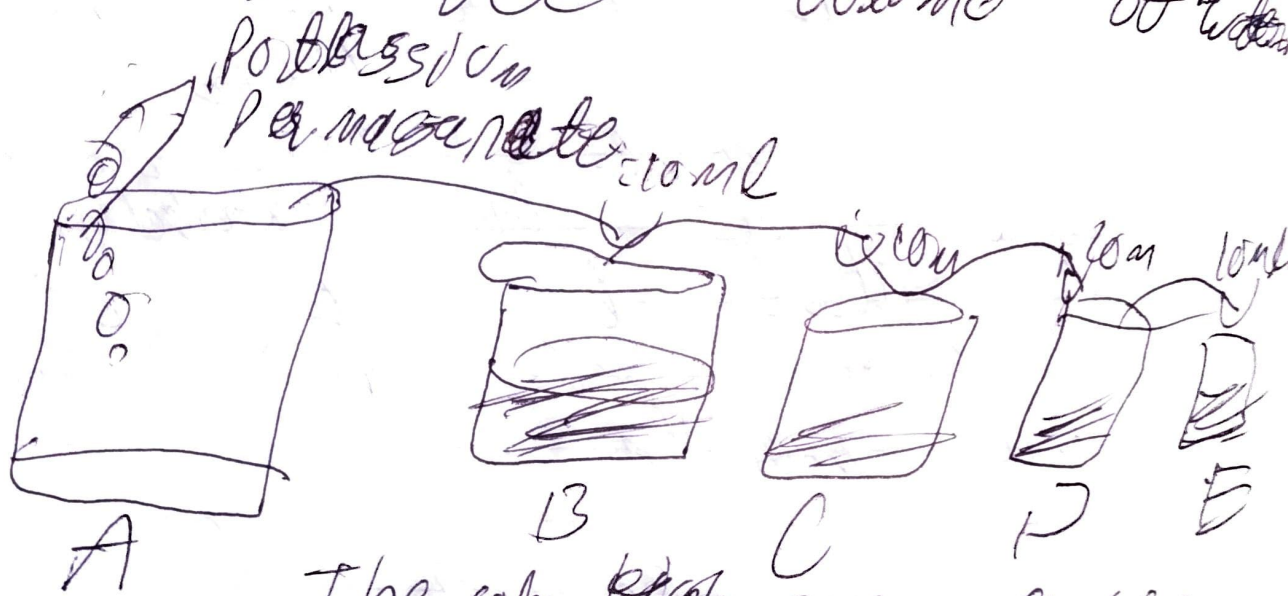
e) The thermometer used to measure the human body is called the clinical thermometer.

f) The normal temperature of human body is 37°C or 98.6°F.

Q11) When crystal of potassium permanganate is placed in a beaker, purple color spread through out the water. What does this observation tell us about the nature of potassium permanganate and water? Explain with activity.

Ans) Take 100 ml of water in beaker, A and dissolve potassium permanganate in it. You will get deep purple solution and mix 50 ml of water in beaker B. You will observe that the color of the solution as the solution is dark purple and continue with D, E.

and you will observe the colour gets lighter and it still coloured. This experiment show ~~not~~ small crystals of potassium permanganate - 13 made up of particles which can colour a large ~~space~~ volume of water.



The colour ~~less~~ gets lighter and lighter.