



WB/ KP SI & CONSTABLE



GS-SCI

PHYSICS AND IT'S CALCULATION

PART-2

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LIVE

| 06:15 PM





HEAT AND TEMPERATURE

$$C/5 = F - 32/9$$

4. THE VALUE OF 40 DEGREE C IN F SCALE IS _____
5. THE VALUE OF 50 DEGREE IN F SCALE IS _____



The fundamental Principle in Physics:

- 1. Matter can neither be destroyed not created but it can be transformed from one state to another.**
- 2. The smallest Unit of an element is called Atom.**
- 3. The simplest form of matter which can retain complete physical and chemical Properties.**
- 4. The force of attraction between similar kind of molecules is called Force of cohesion.**
- 5. The force of attraction between different kind of molecules is called Force of adhesion.**

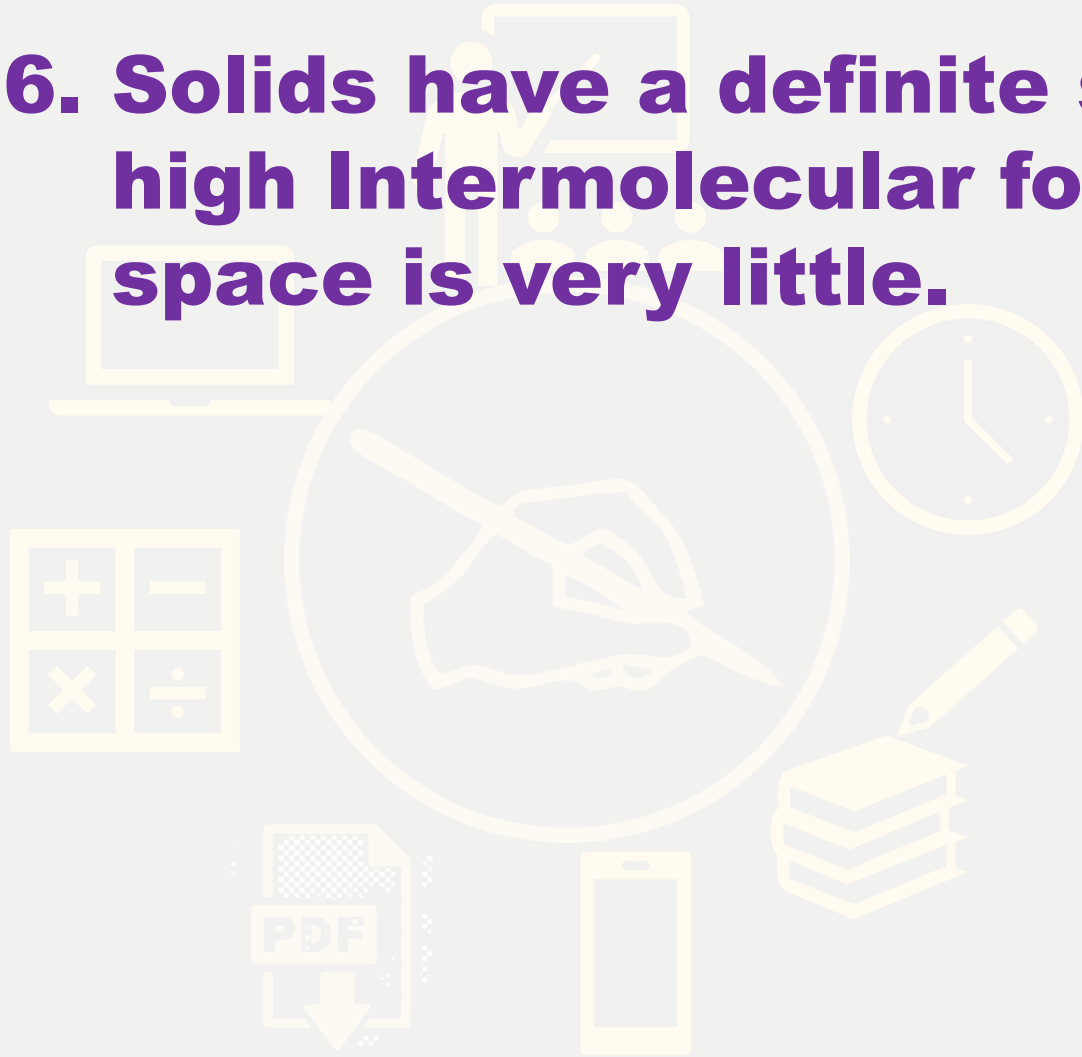


Intermolecular literally means "between molecules".

Intermolecular space is the distance between molecules.

Intermolecular forces (IMF) are the forces which mediate interaction between molecules, including forces of attraction or repulsion which act between molecules and other types of neighboring particles.

6. Solids have a definite shape and size because of high Intermolecular forces as the Intermolecular space is very little.



7. Liquids have only definite volume but no definite shape as the Intermolecular forces are less as the Intermolecular space is large.



8. Gases have no definite shape and volume as the Intermolecular forces are negligible as the Intermolecular spaces are very large.



Stress is defined as the restoring force per Unit Area The restoring force is equal in magnitude and opposite in direction to the applied force also known as deforming force.

Surface Tension is defined as the tension of the surface film of a liquid caused by the attraction of the particles in the surface layer by the bulk of the liquid, which tends to minimize surface area.
Temperature Increases ----- Surface Tension Decreases

Viscosity is defined as the state of being thick, sticky, and semi-fluid in consistency, due to internal friction.

**Temperature Increases ---- Viscosity
Decreases**



LIGHT

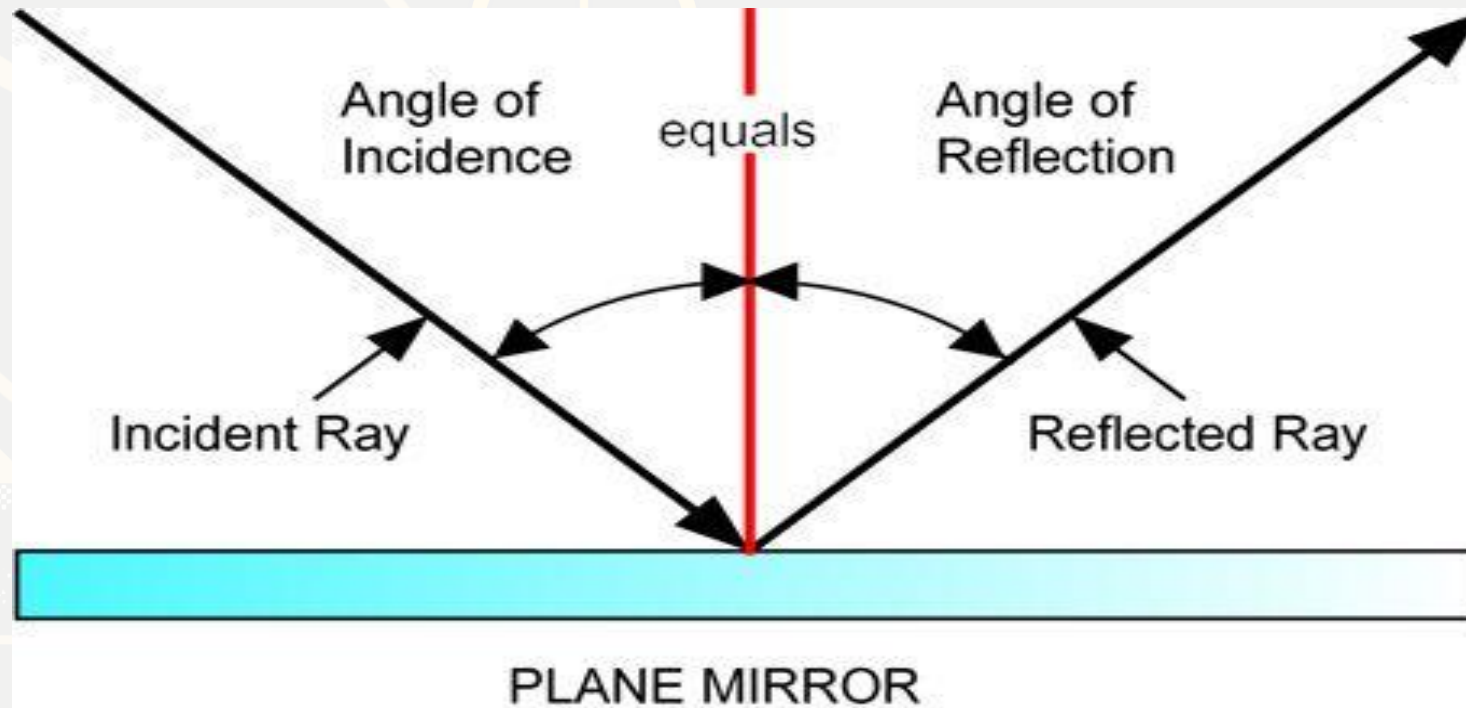
The speed of light in vacuum is 299,792,458 meters per second.

The medium through which light can pass easily is transparent medium.

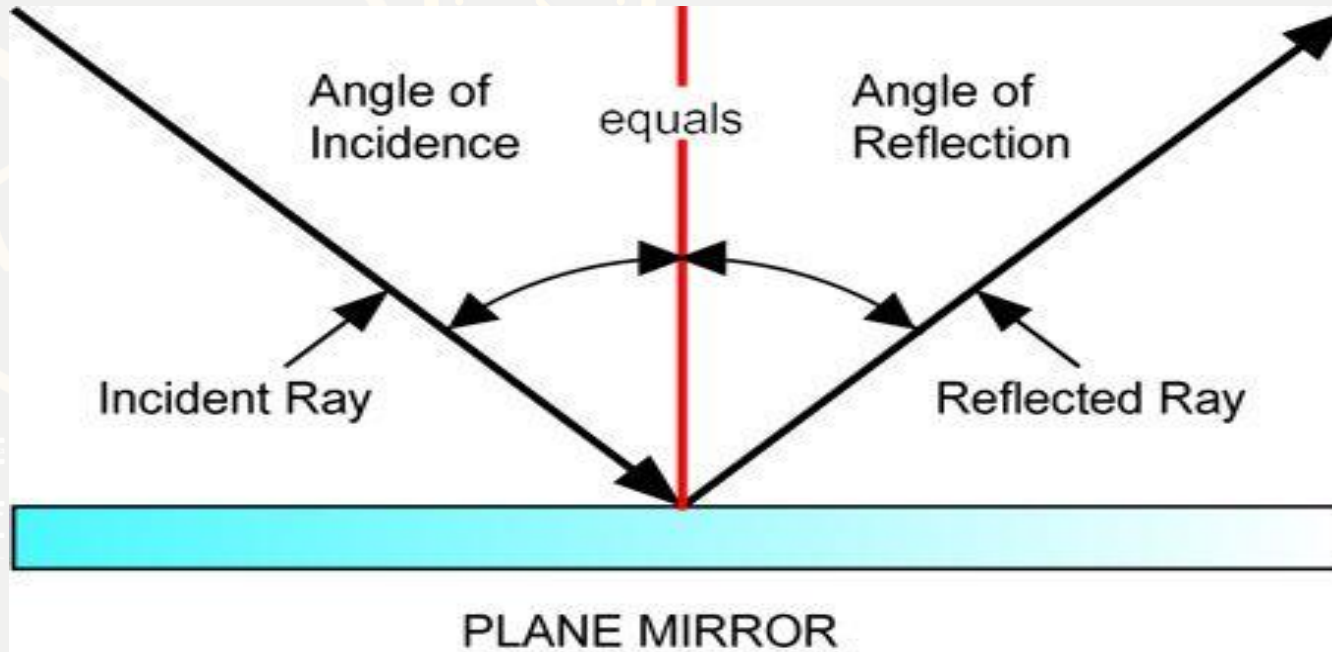
The medium through which light can pass partially is translucent medium.

The medium through which light cannot pass is opaque medium.

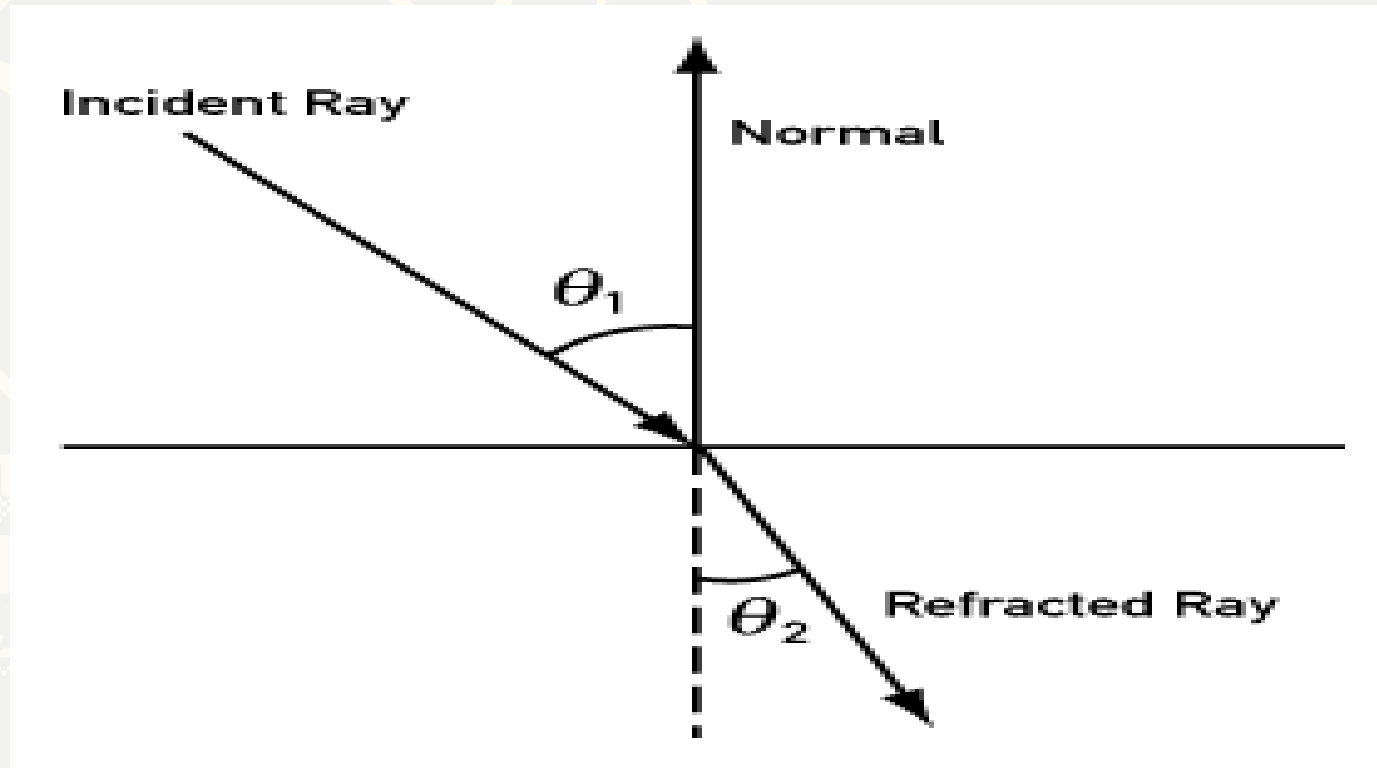
Incident Ray- The ray of light which strikes the surface of a medium before reflecting back.



Reflected Ray- The ray of light which strikes back from the medium after reflection is called reflected ray.



Refracted Ray- The ray of light which that is transmitted into the second medium and travels in a different direction than the incident ray.

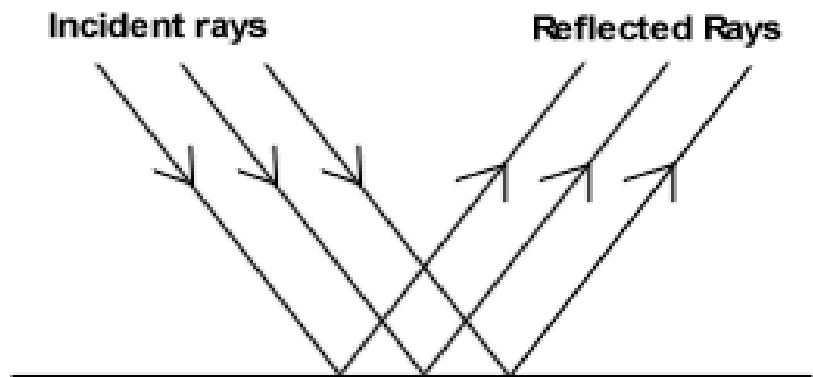


Two Laws of Reflection- Angle of Incidence is equal to the angle of reflection Incident Ray, Reflected Ray and the Normal drawn to the point of incidence all lie in the same plane.

Diffused Reflection- When all parallel incident rays reflected from a plane surface are not parallel, it is diffused reflection.

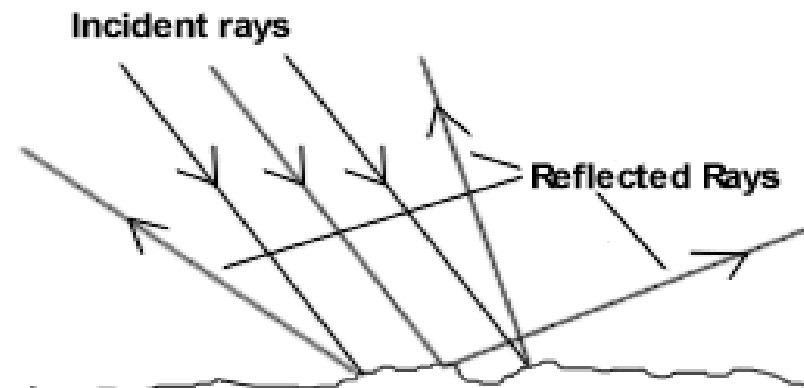
DIFFUSE REFLECTION is the reflection of light or other waves or particles from a surface such that a ray incident on the surface is scattered at many angles rather than at just one angle as in the case of specular reflection. ... Many common materials exhibit a mixture of specular and diffuse reflection.

Regular Reflection



Eg. plane mirror or any other surface that produces a reflected image.

Diffuse Reflection



This is like any surface that we can see but does not reflect an image

1.1 Byte is equal to:

a) 2 bits

c) 16 bits

b) 8 bits

d) 32 bits

2. The unit used internationally for measuring the volume of crude oil is:

a) Litre

c) Barrel

b) Gallon

d) US gallon

3.A barrel of crude oil is equal to:

- 1) 42 US gallon**
- 2) 159 Litre**
- 3) 100 Litre**
- 4) 25 US gallon**

a) Only 1

c) 1 and 2 Only

b) Only 2

d) 3 and 4 Only

4. 18 Carat gold is:

a) 50% gold and 50% impurity

b) 75% gold and 25% impurity

c) 100% gold

d) 60% and 40% impurity

5. In which of the following industries is mica used as a raw material?

a) Electrical

b) Iron and steel

c) Toys

d) Glass and pottery

Thank
you

