

Improve content

Keep length of all questions

equal

Understand the question

carefully

Draw flow charts

Use scientific terminologies

Use scientific examples

Follow appropriate structure

according to the question i.e

A. Difference b/w Igneous rocks and metamorphic rocks.

1- Igneous rocks:

Work hard.

The type of rocks formed from the cooling and solidification of magma or lava.

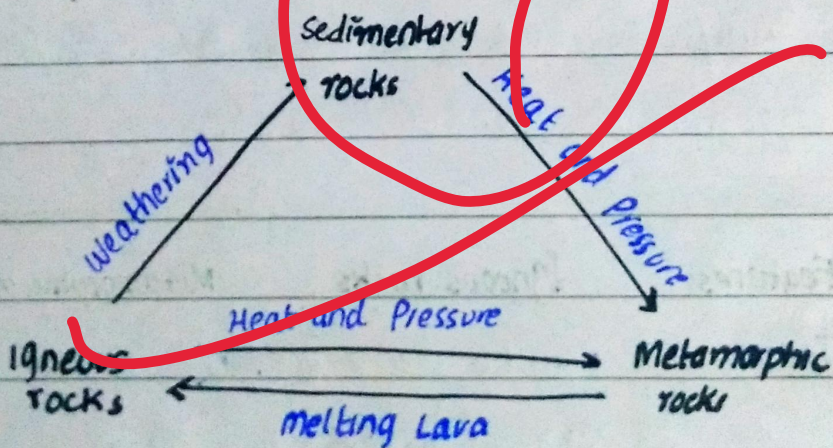
2- Metamorphic rocks:

The type of rocks formed from the transformation of existing rocks under heat, pressure or chemical processes.

Features	Igneous rocks	Metamorphic rocks
Texture	• can be coarse grained (intrusive) or fine grained (extrusive)	• can have foliated (layered) or no foliated texture.
Examples	• Granite, basalt, Pumice	• Marble, Schist, slate.

Mineral Composition	Original minerals are often crystallized from molten material	Original minerals are altered or recrystallized
Location	Found near volcanic regions or deep within Earth's crust	Found in regions with tectonic activity or mountain building processes

The Rock Cycle.



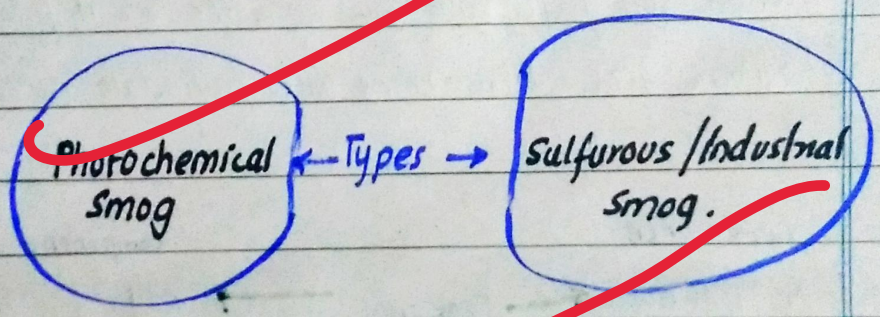
b. Explain the phenomenon of smog and give its types.

A. Smog:

Smog is a type of intense air pollution that forms when certain pollutants interact with atmospheric conditions.

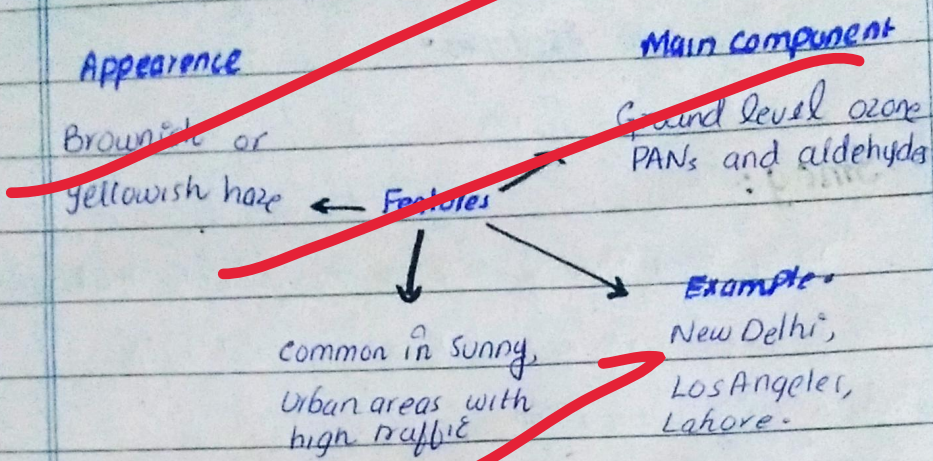
The term "smog" comes from a combination of "smoke" and "fog", as it often appears as a thick hazy layer in the air.

B. Types of Smog.



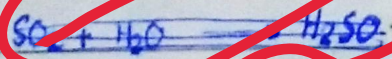
1. Photochemical smog-

It occurs when sun-light reacts with nitrogen oxides (NOx) and volatile organic compounds usually emitted by vehicles and industrial processes.

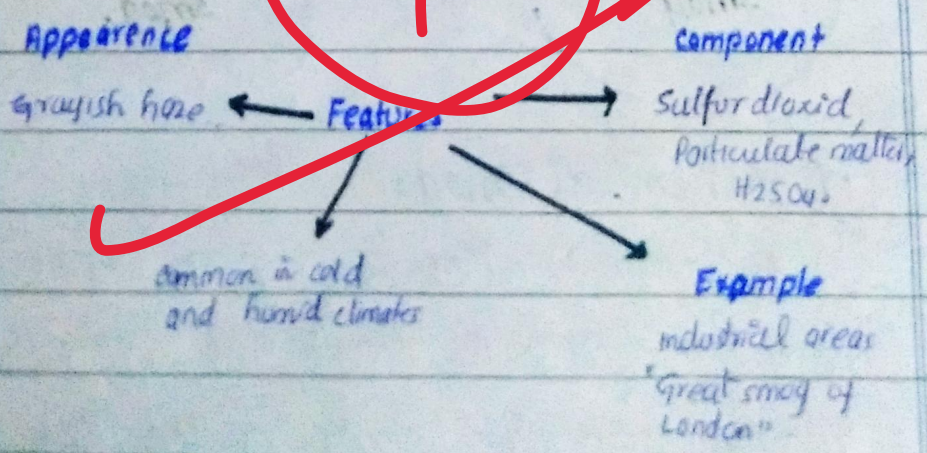


2. Sulfurous smog (Industrial smog).

It results from burning fossil fuels, especially coal, which release sulfur dioxide (SO₂)



when SO₂ react with moisture in the air, it forms sulfuric acid and combines with particulate matter

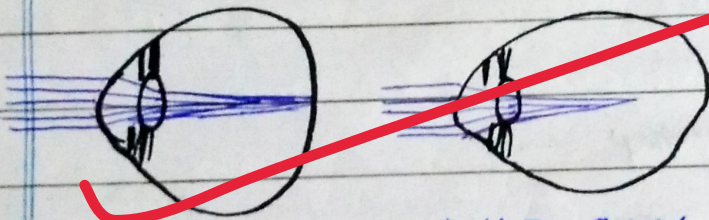


Q.

Explain short and far
sightedness.

A. Short Sightedness:

Short Sightedness or near sightedness is also known as myopia. It is the defect of an eye in which a person can see nearby objects clearly, but has a blurred vision when looking at things at a distance.



Normal eye

Light Eye Focused
in front of retina
(Myopia).

Causes:

- 1- It is likely to result from the combination of genes and life style factors (such as spending long periods of time doing close-up work or indoors)
- It often runs in families

2. Treatment.

- corrective concave lenses
- contact lenses
- LASIK surgery

B. Far sightedness:

Far sightedness, also known as Hyperopia is an eye condition that causes blurry vision when looking at things close up (like words in a book)

1. Symptoms

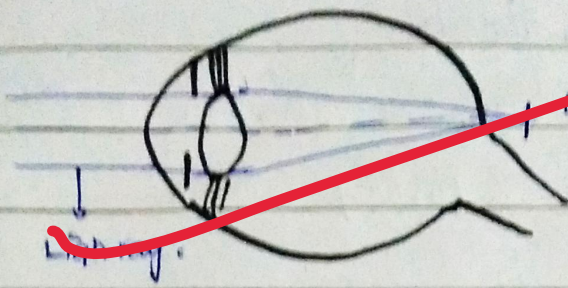
- Blurry vision
- Difficulty reading
- Dull pain in eyes
- Eye strain

2. Causes:

- Having an eye ball that's relatively short (decreased axial length)
- Having a cornea that's flatter than expected.

3. Treatment.

- corrective convex lenses
- refractive surgery

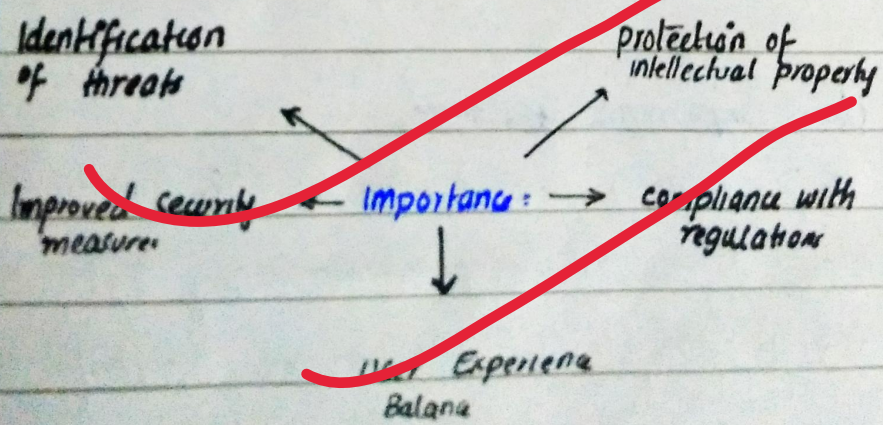


light is under focused causing a blurred vision

c. Give the importance of risk management to assessment in DRM.

A. Importance of Risk assessment in DRM:

Risk assessment is a critical step in designing and implementing effective DRM strategies to protect digital content. It helps identify potential vulnerabilities and ensure proper measures are in place.



1. Identification of Threats

It helps to recognize risks like unauthorized access, piracy and hacking attempts.

2. Protection of Intellectual Property

It ensures that creators and publishers maintain control over their content.

3. Compliance with Regulations

It ensure adherence to copyright laws and licensing agreements, and reduce legal risks associated with non compliance.

4. Improved Security Measures

It guide the development of robust encryption and access control mechanisms.

5. User Experience Balance

It helps implement DRM solutions that protect content without overly inconveniencing legitimate users. It also identifies risks of user dissatisfaction due to restrictive policies.

a. write a note on solar system

A. Solar system:

The solar system is a collection of celestial bodies including the sun, planets, moons, asteroids, comets and other objects, that are bound together by gravity.

- It is located in the Milkyway galaxy and forms a significant part of our cosmic neighbourhood.

B. Key Components:

Sun

central star
massive ball of H and He gas
sun's gravitational pull keeps all other objects in ~~place~~^{orbit} around it.

Planets.

eight planets, revolve around sun.
Inner planets: Mercury, Venus, Mars, Earth
outer planets: Jupiter, Saturn, Uranus, Neptune.

Moons-

natural ^{in planets} satellites that orbit planets

Dwarf Planets

smaller planet, that do not have clear orbits e.g Pluto

Asteroids

Rocky objects found in Asteroid Belt between Mars and Jupiter.

Comets.

Icy body that originate in the outer reaches of the solar system.

The Kuiper Belt:

Region beyond Neptune that contains many icy objects including dwarf planets and comets.

Question 4.

c. Differentiate between RAM and ROM;
also define the terms Nibble, USB and
Motherboard.

A Difference between RAM and ROM.

RAM:

- RAM stands for Random Access Memory.
- RAM is used to temporary store data while the computer is on.
- The Data in RAM is volatile in nature, meaning that as soon as it loses power, that data disappear.
- It is more flexible, but expensive.

ROM:

- ROM stands for Read only memory.
- It refers to permanent memory.
- It's non volatile
- It generally can't be changed after it's created
- It is cheaper as compared to RAM

B. Motherboard:

The motherboard is the main circuit board in a computer, connecting all essential components like the CPU, RAM, storage and peripherals. It facilitates communication between hardware components through buses and chipsets.

C. Nibble:

It is also called as "nybble" and "nyble" when referring to a "byte".

It is a second smallest unit of information for data transmission and storage. It corresponds to half of a byte and thus four bits.

D. USB:

USB ~~aka~~ (Universal Serial Bus) is a technology used to connect computers to peripheral devices such as printers, scanners or keyboards etc.

6. Give the importance of

Pituitary gland:

Pituitary Gland:

It is a small pea sized organ located at the base of hypothalamus. It is often referred to as master gland because it regulate and control many vital body functions through hormone secretion.

Importance:

hormonal Regulation:

It produces and release various hormones that regulate vital body processes. such as growth hormone, prolactin, Thyroid stimulating hormone, ACTH.

Control of the endocrine system,

It control and coordinate the activities of other endocrine glands such as thyroid gland, adrenal gland, gonads etc.

Water and Blood Pressure Regulation.

The posterior pituitary release ADH (Anti-diuretic hormone) which regulate the body's water balance by reducing water loss in kidney.

Growth and Development

It secrete growth hormone through which it supports overall growth and the development of muscle.

Reproduction.

It produce hormones which are vital in the reproductive process such as menstrual cycle in females and sperm production in males.

Stress Response.

Its secretion of ACTH triggers the release of cortisol from adrenal gland, helping the body manage stress by regulating metabolism and the immune response.