"Section - 1"

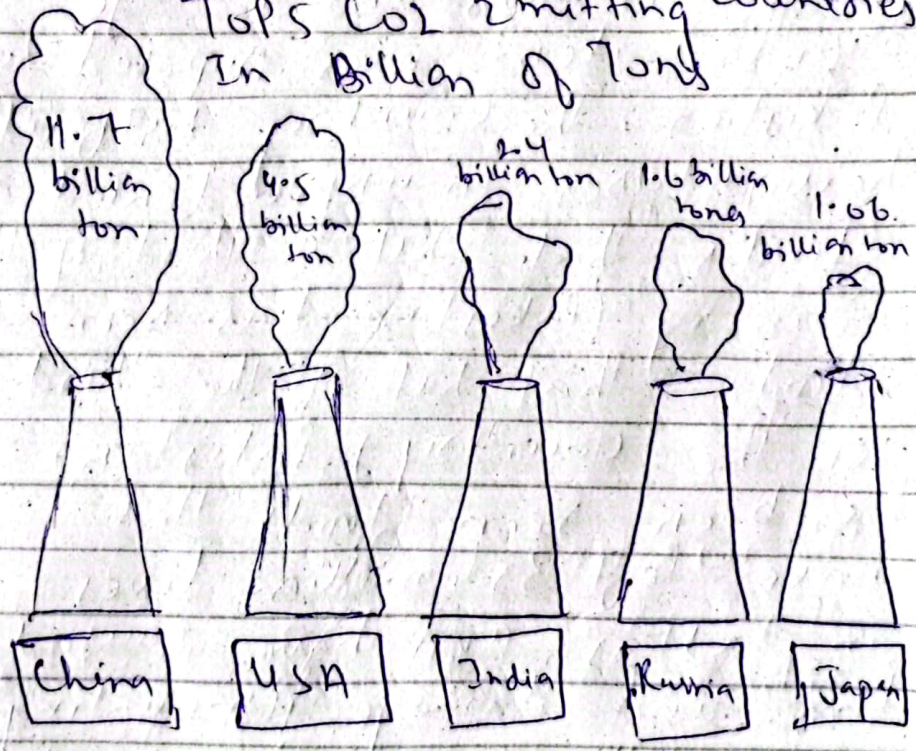
"Q.No.2"

"a".

Pakistan suffered a loss of $40 bn due to heavy floods of 2022. The loss and damage agenda item was proposed by Pakistan. The country suffered heavy losses in unprecedented floods that hit a third of the country "(Pakistan has seen floods that hit of the third of the country.) Pakistan has been seen floods that have left 33, million lives in tatters and have caused loss and damage amounting to 10% of the GDP. Pakistan has contributed only 0.28% of the Co2 emittion but it among the biggest victims of climate change. The US, Europe, India

China, and japan; the world's biggest Polluters, must accept responsibility for the catastrophic flood in Pakistan and Climate disasters elsewhere. A direct link of the disaster in Pakistan to Climate change has been Confirmed by a team of 26 scientists affiliated with world weather Attribution

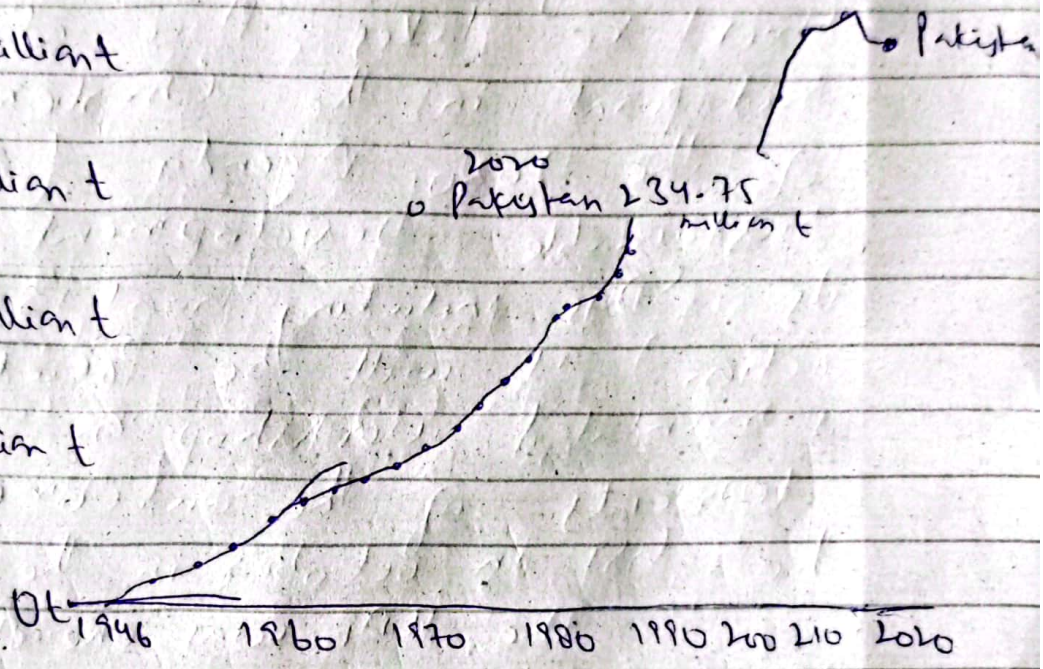
Tops Co2 Emitting Countries In Billion of Tons



Tops current Polluters. Source: our world in Data

Annual CO_2 emissions

carbon dioxide (CO_2) emissions from fossil fuels and industry. Land use change is not included.



Source Global Carbon Project

Our world Data.org/CO_2-and-other-greenhouse-gas-emission

The 2023 UN Climate change conference will convene from 30 November to 12 December 2023 in Dubai, United Arabs Emirates (UAE).

The first global Stocktake of the implementation of the Paris Agreement will conclude at COP28 Each Stocktake is a two year process that happens every

five years with the aim of assessing the world's collective progress towards achieving its climate goals. The first Global Stocktake takes place at the mid-point in the implementation of the 2030 Agenda for Sustainable Development and its SDGs including Goal 13 (Climate action). It will be preceded by a mandated workshop on the elements of the outcome of the GST in October in the UAE.

The UAE was one of only 29 countries to submit a revised second NDC ahead of COP27. The enhanced target is expected to translate into an absolute emissions reduction of about 93.2 million metric tons of CO2e.

"B"

Fat Soluble Vitamin

Fat-Soluble vitamin (A, D, E and K) are absorbed by fat (unlike water) They are absorbed by fat globules that travel through the small intestines and are distributed through the body in the blood stream

unlike water-Soluble vitamins, excess fat-Soluble vitamins are stored in the liver and fatty (adipose) tissues for future use. They are found most abundantly in high-fat food and are better absorbed if eaten with fat.

Fat-Soluble Vitamin And Toxicity:

Fat-Soluble vitamins can accumulate to toxic level if taken in excess. where a well-balanced diet can't cause

toxicity, Overdosing on fat-soluble vitamin supplements can. Symptoms and side effects of fat soluble vitamin toxicity vary depending on the vitamin. They range from nausea and vomitting to slowed growth and birth defects.

Four Types of fat-soluble Vitamins:

- **Vitamin A:** Is integral to bone formation, tooth formation, and vision. It contributes to immune and cellular function while keeping the intestines working properly.

- **Vitamin D:** aids in the development of teeth and bone, by encouraging the absorption & metabolism of Phosphorous and Calcium.

Vitamin E: Is an antioxidant that helps fight infection and

keeps red blood cells healthy.

Vitamin K is central to blood clotting and also keeps bones healthy

Water-Soluble Vitamins.

Water-Soluble vitamins are those that are dissolved in water and readily absorbed into tissues for immediate use. Any excess excess is quickly passed in urine. Because they are not stored in the body, water-soluble vitamins need to be replenished regularly through your diet.

Water-soluble vitamins rarely accumulate to toxic levels. certain types of water-soluble vitamins, such as vitamin C, can cause diarrhea if taken in excess.

The water-soluble vitamins include the B-complex group and vitamin C.

Vitamin B2 (thiamine) helps to release energy from foods and is important in maintaining nervous system function.

Vitamin B_2 (riboflavin) Promotes good vision and healthy skin and it is also important in converting the amino acid tryptophan into niacin.

Vitamin B_3 (niacin) aids in metabolism and the formation of hormones. It may help to control cholesterol and have anti-inflammatory benefits.

Vitamin B_6 (~~biotin~~) (Pyridoxine) aids in Protein metabolism and the Production to red blood cells, insulin, and hemoglobin.

Vitamin B_7: (biotin) helps release energy from carbohydrates and acids in the metabolism of fats, Proteins, and carbohydrates from food.

Vitamin B_9: (folate or folic acid) also aids in Protein metabolism and red blood cell formation, and it may reduce the risk of neural tube birth defects.

vitamin B_{12} (cobalamin) aids in the production of normal red blood cells as well as the maintenance of the nervous system.

Vitamin C (ascorbic acid) is central to iron absorption and collagen synthesis. It aids in wound healing and bone formation while improving overall immune function.

"C"

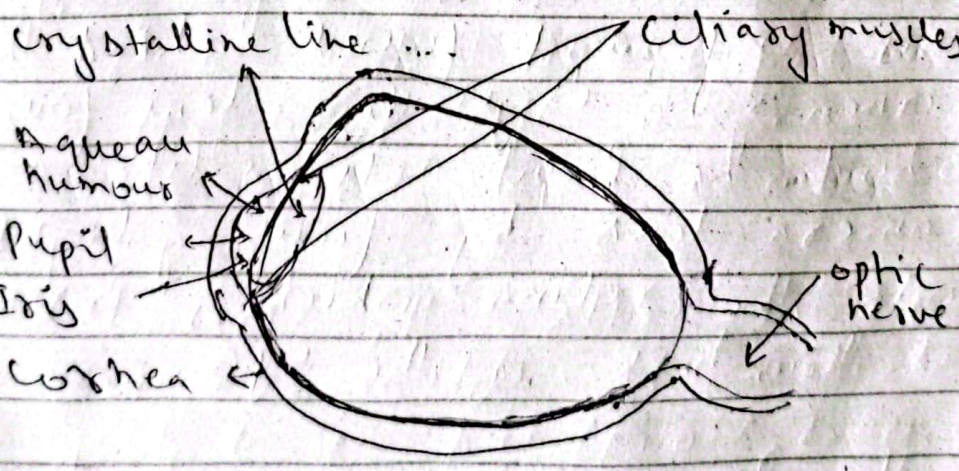
The cornea is the thin membrane that lies at the front of the eyes. Iris and pupil found behind the cornea. The crystalline lens found behind the pupil acts as like a camera lens by focusing light onto the retina which is present at the back of the eye.

The process of vision

light enters the eyes through the cornea. After passing

through the cornea, light travels through the pupil, Behind the cornea, there is a structure called iris which controls the size of the pupil. Behind the iris, there is the lens that focuses light on the retina and forms an inverted image of the object on the retina. The retina contains light-sensitive cells that get activated and generate electrical signals. These signals are sent to the brain by the optic nerve.

Structure of Eye



a - Sclera and cornea form the outer layer

(b) Choroid, Ciliary body, and iris constitute the middle layer.

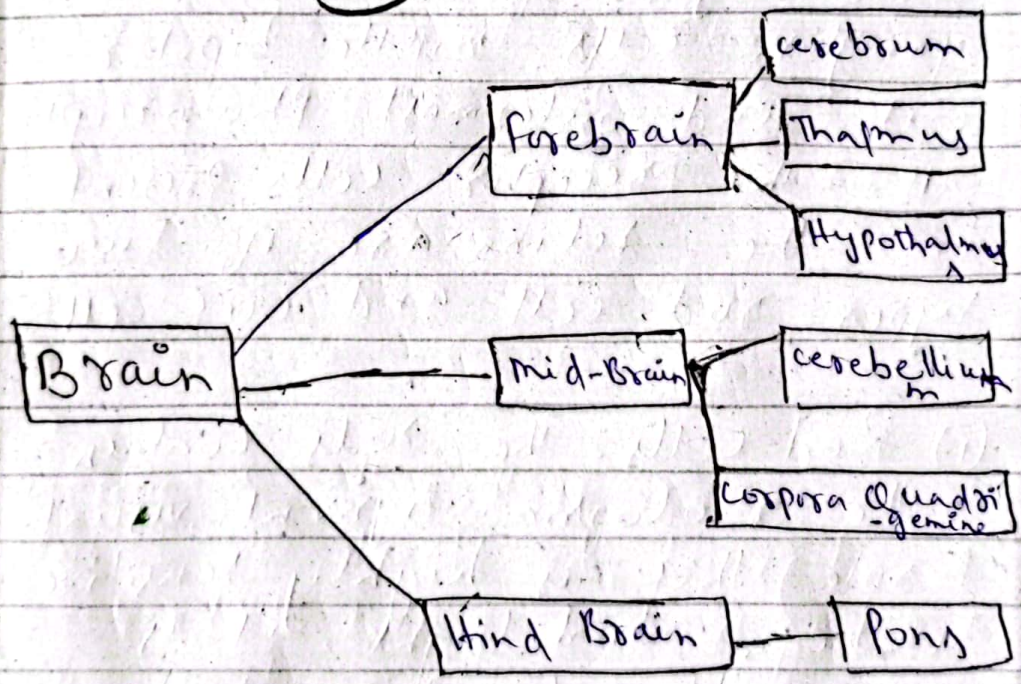
(c) The innermost nervous coat of the eye contains the retina. The retina is the innermost layer. It contains three layers of cell - inner ganglion cells, middle bipolar cell, and outermost Photoreceptor cell. The receptor cells present in the retina are of two types - rod cell and cone cell.

(i) Rod cells: The rods contain the rhodopsin pigment (visual Purple) that is highly sensitive to light and dim light. It is responsible for twilight vision.

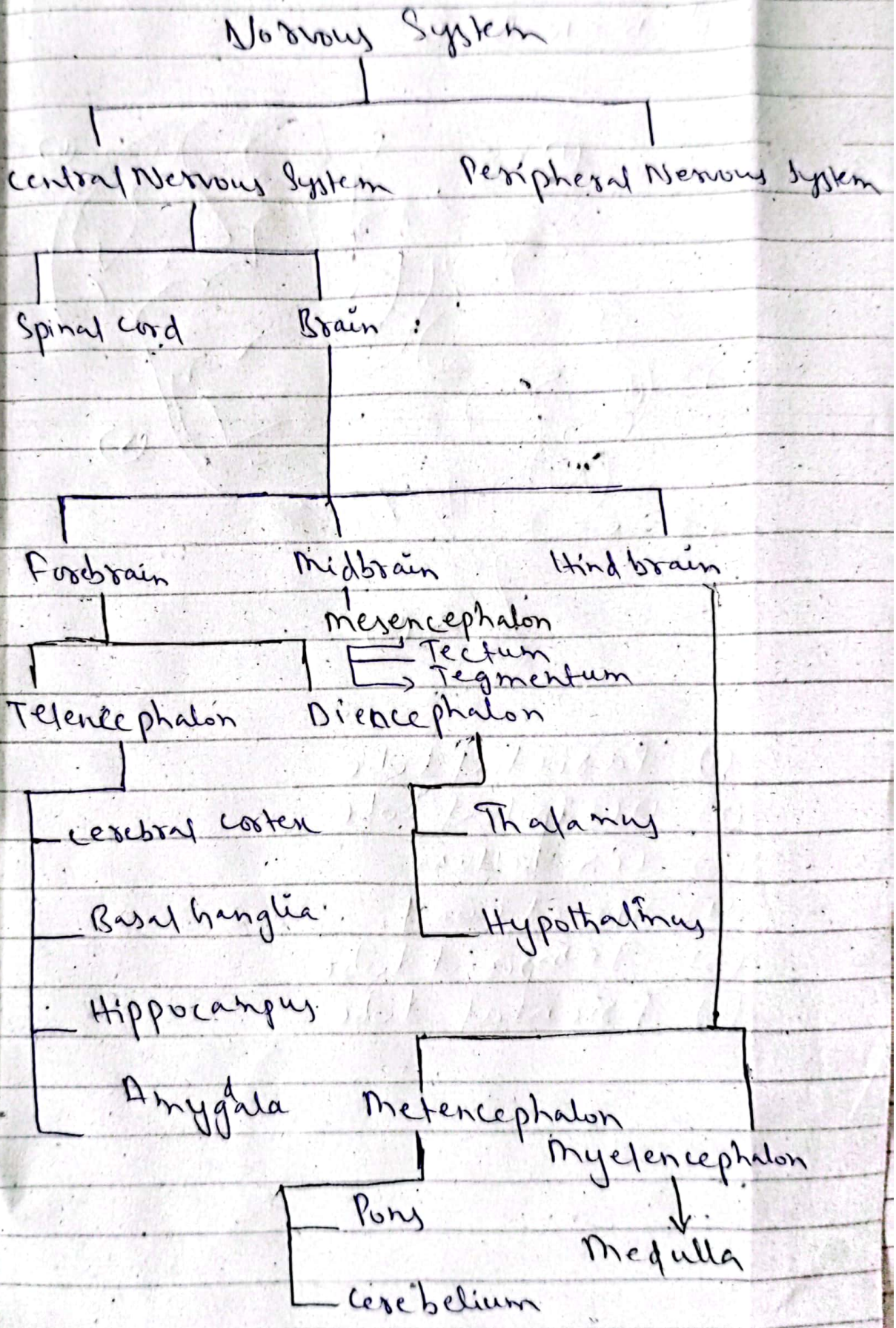
(ii) Cone cells - The cones contain the iodopsin Pigment (visual violet) and are highly sensitive to high-intensity light. They are responsible for daylight and color vision.

The innermost ganglionic cells give rise to optic nerve fibers that forms the optic nerve in each eye and is connected to the brain.

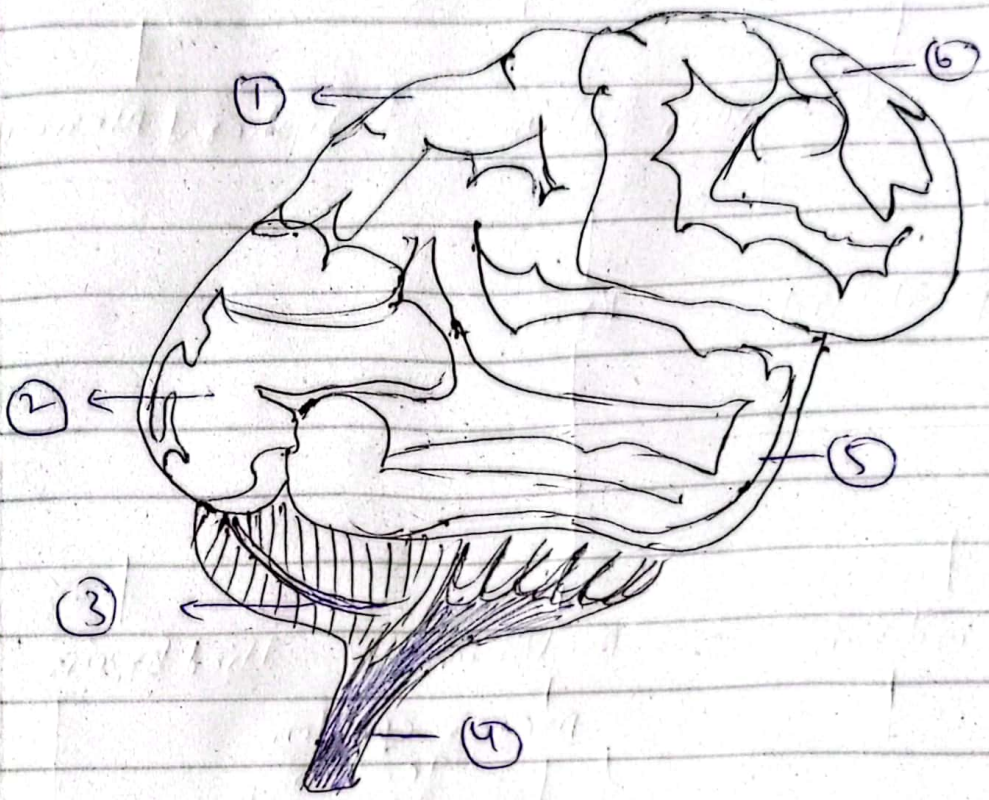
"D"



Flow chart of human brain


Nervous System
Central Nervous System
Peripheral Nervous System
Spinal cord
Brain
Forebrain
Midbrain
Hind brain
Mesencephalon
Tectum
Tegmentum
Telencephalon
Diencephalon
Cerebral cortex
Thalamus
Basal ganglia
Hypothalamus
Hippocampus
Amygdala
Metencephalon
Myelencephalon
Pons
Medulla
Cerebellum

Human Brain



(1) Parietal lobe
(2) Occipital lobe
(3) cerebellum
(4) Spinal cord
(5) Temporal lobe
(6) Frontal lobe