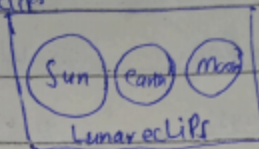


Section-I

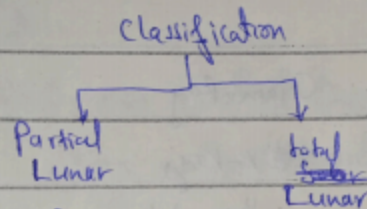
Q. No. 3

(a) What is lunar eclips Explain in detail with apt diagram

When earth is between the Sun and moon is called Lunar eclipse

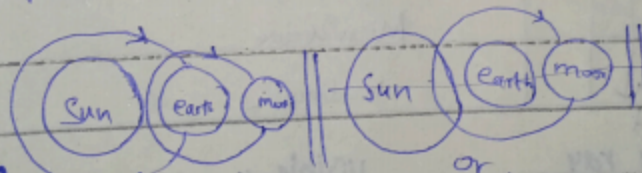


Classification



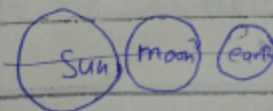
Total Lunar

~~Partial~~ Total Lunar are the central line of earth aligned between the Sun and moon



Partial Lunar

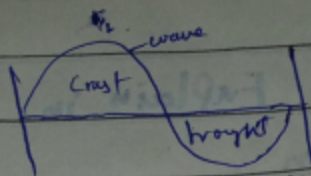
~~total~~ Partial Lunar is the above or below of central line between the Sun and earth.



(c) ~~Give~~ Give a brief account of electromagnetic radiations. What is EMR Spectrum?

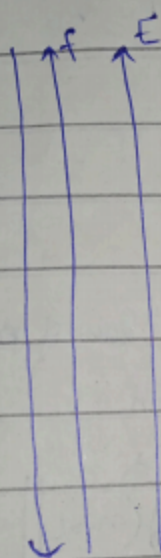
"the electromagnetic radiation

require no medium for propagation"



$E = hc$ is the electromagnetic
EMR

- 1) Gamma Rays
- 2) X-rays
- 3) Ultraviolet , infrared
- 4) visible
- 5) ~~microwave~~ Microwave radiowave.



Gamma ray
X-rays
ultraviolet
visible
infrared
Microwave
radiowave

1) Gamma ray

Gamma rays are used in building find the edges and crack

2) X-rays

X-rays are used in for bone (X-ray) fracture

3) ultraviolet

it is used in convert the ultraviolet into the visible

visible

it is the rain bow.

infrared

it transform signal in TV. it is used in remote

Microwave

it is used in TV, Mobile etc

radiowave

radiowave in satellite

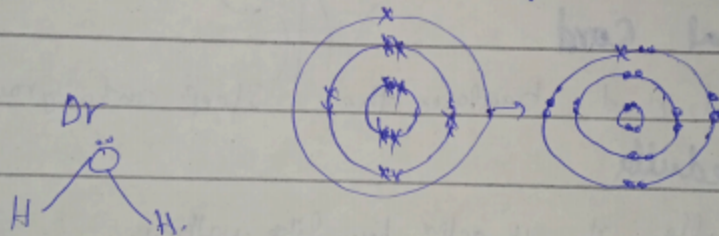
(d) Are earth Quakes and volcanic eruption interconnected if yes then how.

Yes because both are ^{caused} the Trembling and shaking of ground inside the earth. both effect human ~~life~~ lives. and destroy the Agriculture root.

Q: No: 2

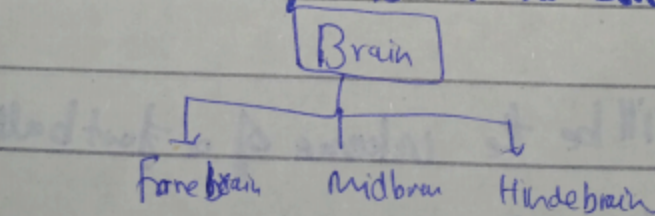
(d) What are covalent bonds? Explain types along with elaborating structure.

Covalent bond are the sharing of electron both



Q: No: 5

Given structure and function of human brain why is it the control center



Forebrain

forebrain contain cerebrum, thalamus and hypothalamus.

Cerebrum The Corpus Cerebrum are connected to right and left side of Hemisphere.

thalamus it occurs between Cerebral and Midbrain.

Hypothalamus it control the Pituitary gland.

Midbrain
Midbrain are between the fore and hindbrain
it control the span and Cerebrum.

Hindbrain
Medulla Spinal, Cerebellum

Spinal Cord

Spinal cord balance the Sleep and daily routine.

Medulla

Medulla it is active base like walking.

Cerebellum

Cerebellum control the Sleep.

Section # 11

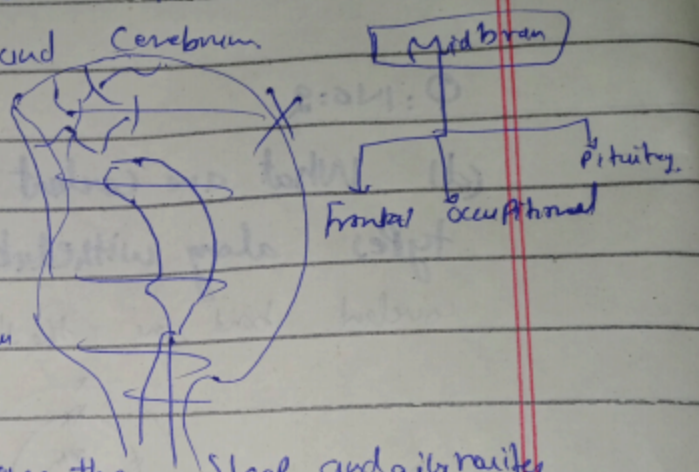
Q: No: 6

(c)

What will be the volume of a football with a radius of 12cm

$$= \frac{4}{3} \pi r^3$$

$$= \frac{4}{3} \times 3.14 \times 12^3 = 75.36$$



(d)

Given a Series -6, -8, 6, 40, 102?

-6, -8, 6, 40, 102?

-2 2 36 62 40

Answer 40

(b) A mixture contains sugar solution and colored water in the ratio of 4:3 If 10 liters

of colored water is added to the mixture, the ratio becomes 4:5
Fin mixt..... give mixt...

$$4:3 = 4:5 = 10$$

$$4/3 = 4/5 = 10$$

$$\frac{4x}{3} = \frac{4}{5}(x+10)$$

$$\frac{4x}{3} - \frac{4}{5}(x+10) = 0 = \frac{4x}{5} = 10 \Rightarrow x = 10$$

OR

$$4x+3-10 = 4x+5-10$$

$$4x+4x = 5-6 = -3+6$$

$$8x = 3$$

$$x = \frac{3}{8} = \frac{1}{4}$$

$$\boxed{x = \frac{1}{4}}$$

(a) Determine the "K" value if the arithmetic mean of 9, 8, 10, K, 12, is 15

$$\frac{9+8+10+K+12}{5} = 15$$

Q: No 8

(c)

Verify the A union B complement formula $(A \cup B)' = A' \cap B'$ for the sets

$$A = \{10, 11, 12, 13, 15\} \quad B = \{10, 12, 14\} \quad \text{and}$$

$$U = \{10, 11, 12, 13, 14, 15, 16, 18\}$$

$$(A \cup B)' = A' \cap B'$$

$$A = \{10, 11, 12, 13, 15\} \quad B = \{10, 12, 14\}$$

$$U = \{10, 11, 12, 13, 14, 15, 16, 18\}$$

$$A \cup B = \{10, 11, 12, 13, 15\} \cup \{10, 12, 14\}$$

$$= \{10, 11, 12, 13, 14, 15\}$$

$$U - (A \cup B) = \{10, 11, 12, 13, 14, 15, 16, 18\} - \{10, 11, 12, 13, 14, 15\}$$

$$= \{16, 18\} \quad (A \cup B)' = \{16, 18\} \quad \text{--- (1)}$$

$$A' \cap B' = (U - A) \cap (U - B)$$

$$U - A = \{10, 11, 12, 13, 14, 15, 16, 18\} - \{10, 11, 12, 13, 15\}$$

$$= \{14, 16, 18\} \quad A' = \{14, 16, 18\}$$

$$U - B = \{10, 11, 12, 13, 14, 15, 16, 18\} - \{10, 12, 14\}$$

$$B' = \{11, 13, 15, 16, 18\}$$

$$A' \cap B' = \{16, 18\} \cap \{11, 13, 15, 16, 18\} = \{16, 18\}$$

$$A' \cap B' = \{16, 18\} \quad \text{--- (2)}$$

Hence Proved both side are equal

$$(A \cup B)' = A' \cap B'$$