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Part-II Section-I

ANSWER 2:

Past A:

1. Define COP:

The full form of COP is Conference of Parties. This is an yearly event which countries from all around the world. The theme of conference is climate mitigation and adaptation.

Now due to occurrence of climate disaster the climate has become one of the theme of conference as well. Last year COP-27 occurred in Egypt. This year the host of the conference is UAE.

2. Climate Finance question in Light of developing countries:

The loss and damage fund has been the bone of contention between the developing and developed countries. Considering that the developed world ~~conter~~ contributes 98% to the carbon emission. While, the developing countries only 2%. The developed ~~tr~~ is expected to pay for the loss and damage of climate disasters in developing countries. However, the developed world is not on-board with

the idea. At the moment the under-developed countries are considered to be the priority. The developing countries like Pakistan are expected to self-finance, as well as, make their policies climate friendly to receive the fund. Additionally, World Bank has ~~received~~ allotted to host the climate fund.

Part b:

1. Distinction between water-soluble and fat-soluble vitamins.

Fat soluble vitamins	Water-soluble vitamins
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1. Soluble in Fat.

1. Soluble in water.

2. Require bile salts and fats for absorption

2. Easily absorbed.

3. Normally not excreted in urine.

3. Have threshold for ~~the~~ urinary excretion.

4 Generally stored in liver

4. Not stored in body except Vitamin B₁₂.

5. Do not act as co-enzymes.

5. Act as co-enzymes.

6. Needed in periodic doses. (in weeks or months).

6. Needed in frequent doses (perhaps in 1 to 3 days).

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2. Give Examples of diet containing different vitamins.

2.1 Water soluble:

B-1: ham, soymilk and watermelon

B-2: Milk, yogurt and cheese

B-5: Chicken, whole grains and broccoli

2.2 Fat soluble:

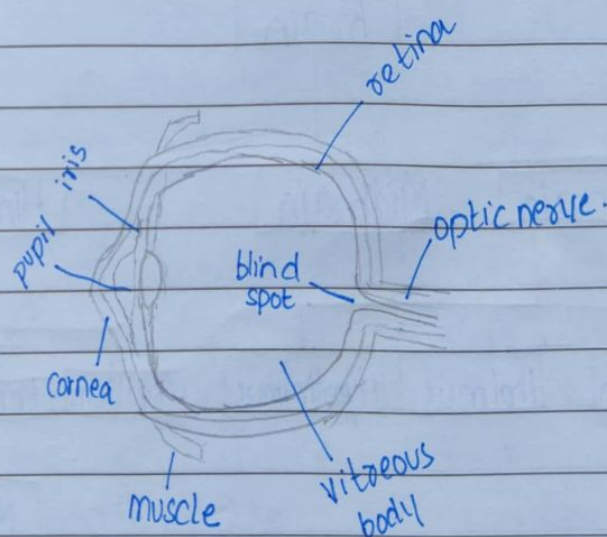
Vitamin A: Beef, Liver and Eggs.

Vitamin D: Fortified milk and cereals.

Vitamin E: Vegetable oils and leafy green vegetables.

Q 2. Part c:

1. Structure of eye:

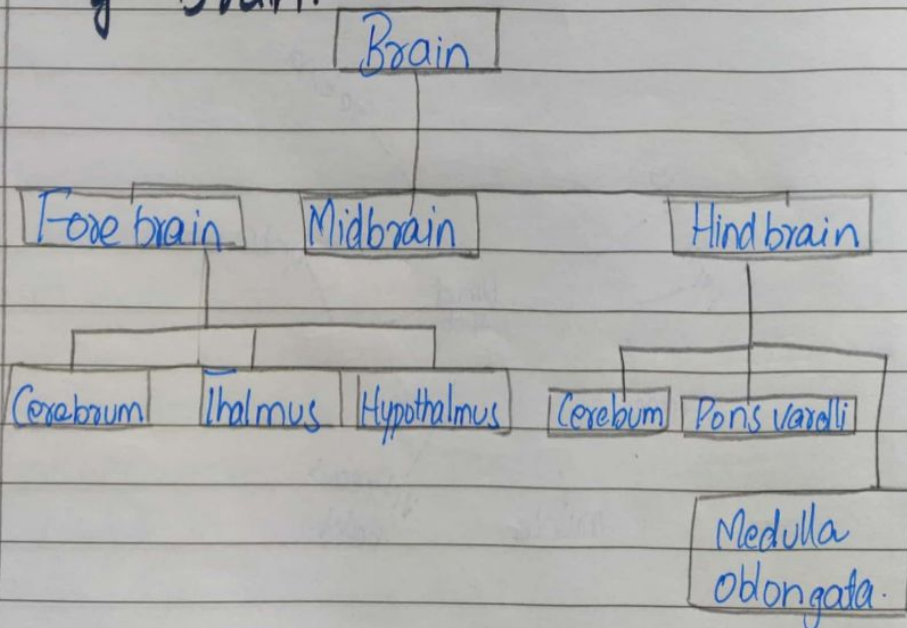


2. Description of structure of eye:

1. Iris: regulates the amount of light that enter the eye.
2. Pupil: the circular opening in the centre of the iris through light passes into the lens of the eye.
3. Cornea: the transparent circular part of the front of eyeball.
4. lens: transparent structure situated behind the pupil.
5. Retina: a light sensitive layer that lines the interior of eye.
6. Macula: a yellow spot on the retina at the back which surround fovea.

Q 2. Part d:

1. Flow chart of different parts of Brain:



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Answer 4.

Part a:

Pesticides: Kill, repel or control form of animals and plant considered to damage agriculture.

Herbicides: A substance that is toxic to plants, used to destroy unwanted vegetation.

Insecticides: Substance used for killing insects

Ceramics: Typically hard and chemically non-reactive and can be formed or densified with heat.

Green House Effect: Process through which heat is trapped near Earth's surface by substances known as greenhouse gases.

Part b:

1. Bonding in water molecules:

Water has an exceptional ability to stick to adhere to itself and other substances. This property of cohesion is described by the ability of water molecules to be attracted to other water molecules, which allow water to be a sticky liquid.

Hydrogen bonds are attractions of electrostatic forces caused by the difference in charge between slightly positive hydrogen ions and other negative ones

In case of water, hydrogen bond between neighboring hydrogen and oxygen atoms of adjacent water molecules. The attraction between water molecules creates a bond known as hydrogen bond.

Q3 Part c:

Types of Waves

RADAR: Electromagnetic or radio waves.

SONAR: Sound waves

LIDAR: Light, ultraviolet and infrared

Mobile Phones: Radio waves

Thermistors: Electromagnetic

Section II

Answer 6:

a. Farmer cut \Rightarrow 300 ft into 2 different sizes

$$L = 5 + 4s$$

$$L + 4s = 300 \quad L + 4s = 300$$

$$8s = 300$$

\Rightarrow Substitute $L = 4s$ in

$$L + 4s = 300$$

$$L + L = 300 \quad x + 4x = 300$$

$$2L = 300 \quad 5x = 300$$

$$L = 150 \quad x = \frac{300}{5} = 60$$

$$150 = 4s$$

$$s = \frac{150}{4} = 37.5$$

x_2

$$x = 60$$

$$4 \times 60 = 240 \text{ feet}$$

$$\Rightarrow 37.5$$

Ans. Longer = 240 Ft
 Shorter = 60 Ft.

Q6. Part b:



$$L = 3 + 2W$$

$$\text{Perimeter} = 20$$

~~$$2(2 + 2W) + (2W) = 20$$~~

~~$$4 + 4W + 2W = 20$$~~

~~$$6W = 16$$~~

~~$$W = \frac{16}{6}$$~~

$$2(3 + 2W) + 2(W) = 20$$

$$6 + 4W + 2W = 20$$

$$6W = 20 - 6$$

$$W = \frac{14}{6}$$

$$L = \quad W = 2\frac{1}{3}$$

$$L = \left(\frac{7}{3}\right) \times 2 + 3$$

$$= \frac{14 + 9}{3}$$

$$L = 2\frac{1}{3}$$

Ans: $L = 2\frac{1}{3}$

$W = \frac{7}{3}$

Part 6 : Part c:

Won : 60% matches

lost = 24 matches

Total = 77

$$\frac{100 \times 24}{40}$$

$$\Rightarrow 60$$

Ans. Total matches: 60.

Part d:

3:2

$$x+2 : y+6$$

$$4 : 5$$

$$6 : 4$$

$$8 : 10$$

$$\frac{x+2}{y+6} = \frac{4}{5}$$

$$5(x+2) = 4(y+6)$$

$$\frac{3}{2}y = \frac{x}{4}$$

$$3y = 2x$$

$$y = \frac{2}{3}x$$

$$5x+10 = 4\left(\frac{2}{3}x+6\right)$$

$$5x+10 = 4\left(\frac{2x+18}{3}\right)$$

$$5x+10 = 4\left(\frac{20}{3}\right)$$

$$3(5x+10) = 80$$

$$15x+30 = 80$$

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$$15x = 50$$
$$x = 10/3$$

$$5x + 10 = 4\left(\frac{2x + 18}{3}\right)$$

$$3(5x + 10) = 8x + 72$$

$$15x + 10 = 8x + 72$$

$$15x - 8x = 72 - 10$$

$$7x = 62$$

~~xx~~ — ~~xx~~

Question 8

Data:

BROTHER = Q D G S N G A

SISTER =

⁷ A	¹ B	C	² D	⁶ E	F
³ G	⁵ H	I	J	K	L
M	⁵ N	³ O	P	⁶ Q	⁷ R
⁴ S	⁴ T	U	V	W	X
Y	Z				

B	15	Q	S	I
R	11	D	I	U
O	8	G	S	J
T	1	S	T	S
H	5	N	E	K
E	11	Q	R	C
R	8	A		

Answer: I U J S K C