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Part II Section-1

Q#2

- (a) Pakistan suffered a loss of \$40bn due to heavy floods of 2022; in this context climate finance is the central question for developing countries. Discuss in the light of Cop-28 going to start in UAE.

Introduction

Cop-28 going to start in UAE from Jan 1 - Dec 12, 2023. This is a pivotal shift from Paris to Dubai. FY 2023 is remained the warmest year. The target was set in Paris agreement to reduce global warming / coal emission by 1.5°C . But unfortunately, it is almost reached to 1.1°C . In

Cop 28, different countries around 200 and they ~~has~~ ^{have} 70,000 delegates. In Cop 28, countries will discuss the loss Pakistan faced because of developed countries unable to meet the target and in this context climate finance hasn't allocated the fund because the countries had to pay to underdeveloped countries to the loss faced by underdeveloped countries due to developed nations.

Fund hasn't been paid to underdeveloped Nations:-

As developed nations are unable to meet the target. Due to these nations, global warming is increasing. Climate changes

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has caused loss to the undeveloped countries like Pakistan. Due to the higher coal emission global warming mounted India + remain fail to shift coal to renewable energy sources. The fund hasn't be given to Pakistan while due to the developed nation Pakistan suffered a loss of \$ 400 bn due to heavy floods of 2022.

What will be discussed in Cop-28 Regarding Finance?

In Cop-28 it will be discussed that developed countries should promise to give the fund that they can able to pay to developing nations and will be discuss to shift from thermal to renewable energy source fully / partially so that Pakistan and other developing countries remain safe from these losses.

b) Distinguish water-soluble and fat-soluble vitamins. Give examples of diets containing different vitamins.

There are two types of vitamins.
water soluble and fat soluble

① Those vitamins that dissolve in water are known as water soluble vitamins

Those vitamins that dissolve in fat are known as fat soluble vitamins.

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(1) Those vitamins that dissolve in water are known as water soluble vitamins

Those vitamins that dissolve in fat are known as fat soluble vitamins.

Example

B and C are water-soluble vitamins.

- ② These vitamins are hydrophilic
- ③ They are not toxic
- ④ Excessive amount of these vitamins can excrete through kidney

Example

A, D, K, E are fat soluble vitamins

- ② Fat-soluble vitamins are hydrophobic
- ③ These are toxic.
- ④ Excessive amount of these vitamins absorb in tissues.

c) Explain the structure of Eye



Eye is a sensory organ. We can see through eyes when the light reflect in our eyes we can see different colours.

Structure of an Eye - Eye consist of external and Internal structure

External structure The external structure of an eye consist of sclera, chornea, Iris and pupil
chornea " white transparent material

that is visible while it contains pupil and

Iris

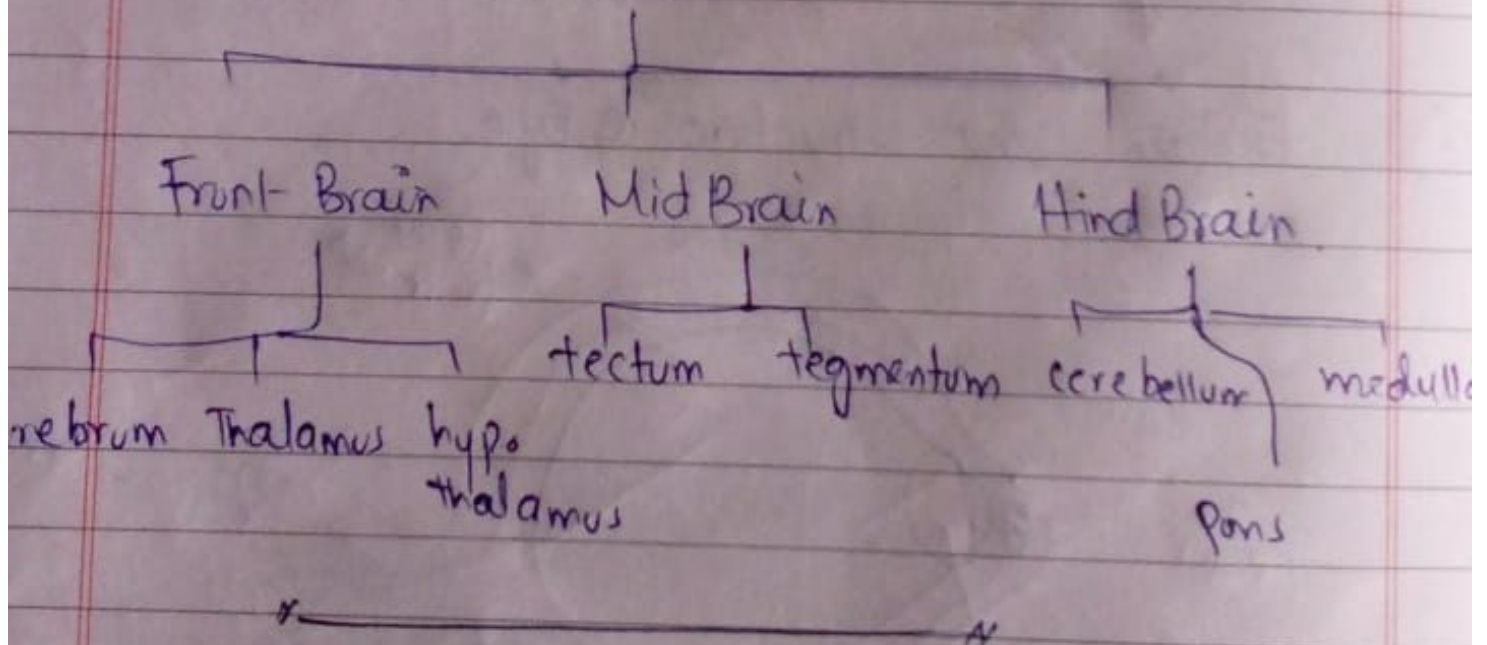
~~Iris~~ pupil protects Iris and ~~Iris~~ pupil enters the light that goes to retina

Internal structure of an eye consists of lens, Retina, vitreous humour, Aqueous humour and optic Nerves.

(d) Define a flow chart of different parts of Brain.

Flow chart of Brain

Brain



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#3

a) Global Warming is a wild beast and we all are poking at it which sticks, Justify.

Global Warming As a wild beast
Global warming is a phenomena in which coal is used as a major element that produces smoke and heat-up the environment. Industries rely on it. The temperature of earth is increasing day by day, due to which climate changes affects. As a result countries suffers losses from flooding.

Reason why Global warming is a wild beast

Because it ^{causes} damaged to the under-developed countries the most.

Loss of lives - poor people die due to flooding or heavy rainfalls. In thousands of numbers people lost their near and dear ones in Pakistan 2022 flooding.

Loss of Houses - people are poor and unable to build the houses once lost. Thousands of houses had been washed away due to flood while there is no fund allocated to help the poor people.

Crops productivity decreased that directly affect economy - Due to heavy rainfall in the unexpected way, the crops

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are damaged. Farmer bears the brunt of the loss. The Demand increase of the crops but supply is less than in the country people faces inflation. As our economy dependent on Agriculture sector, Economy fall into the crisis due to the crop damage.

To wrap up, we can say that Global warming is a wildbeast that is not only affecting developed but also undeveloped countries the most specially poor. faced losses in the form of crops, houses and lives, so, certain measures need to be taken in Energy sector to reduce the global warming.

(b) What is the origin of universe, how age of universe can be calculated?

Big Bang theory-

Big bang theory believe that ~~the universe~~ ^{something} exploded and as a result of explosion the universe came into being.

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2) Write a short note on Semi-Conductors?

Semi-Conductors

(are those conductors that can't pass electricity^x)

Semi-Conductors are those materials that^s conductivity is in between conductor and insulators eg Silicon. These are the essential components of electronic devices.

Function: It controls and manages the flow of electric current in electronic equipment and devices.

Section II

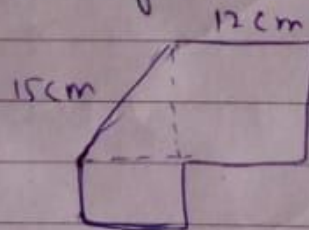
Q# 8

- (a) If in a certain language, Brother is written as Q D G S N Q A, then in the same language, SISTER would be written as?

If brother is written as Q D G S N Q A then SISTER would be written as H U K S K b.

AS ~~B~~^{comes} 14 letter after b, similarly H comes 14 letter after S, then the difference of 13 letter back, 7, 4 and 5 letter, 9, letter after Q and 16 letter back A from Y same is the case of sister.

- (c) Calculate the total Area and perimeter of the given shape



$$\begin{aligned} \text{Square formula} &= 4 \times \text{sides} \\ &= 4(12) \end{aligned}$$

$$\text{Perimeter of square} = 48$$

$$\begin{aligned} \text{Area of triangle} &= b \times h \\ &= 15 \times 12 \\ &= 180 \end{aligned}$$

$$\begin{array}{r} 15 \\ \times 12 \\ \hline 30 \\ 150 \\ \hline 180 \end{array}$$

- (d) There are nine students in a group having age 15, 15, 16, 16, 17, 17, 18, 19. Calculate mean, medium, mode and range of their ages, also define the above

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mention term?

Solve

$$\text{Mean} = \frac{\text{add all numbers}}{\text{total number}}$$

$$\text{Mean} = \frac{15+15+16+16+17+17+18+19}{8}$$

$$= \frac{133}{8}$$

$$\text{Mean} = 16.625$$

$$\text{Range} = \text{Highest value} - \text{lowest value}$$

$$\text{Range} = 19 - 15 = 4$$

~~Medium = 15, 16, 17~~

~~Mode = 15, 16, 17~~

~~Medium = 16, 17~~

Def

Medium is the repeated middle value of the given number

Mode: Repeated value in the given number.

Range: The difference between highest value and low value.

Mean: Add all the given value and divide by the total number given in the

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1) A concert hall 400 seats of which 325 are occupied. Express the attendance at a percent of Capacity.

Solution

Seats = 400

occupied seats = 325

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Find Percentage = ?

$$\% \text{ age} = \frac{\text{obtained}}{\text{Total}} \times 100$$

$$\% \text{ age} = \frac{325}{400} \times 100$$

$$= 81.25$$

- (b) If 30 persons use 40kg of sugar in 10 days. Find in how many days 80 persons will use 320kg of sugar?

persons	Days	Sugar
30 ↓	↑ 10 days	40kg
80 ↓	↑ x	320kg

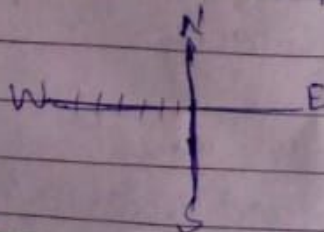
$$\frac{x}{10} = \frac{80}{30}$$

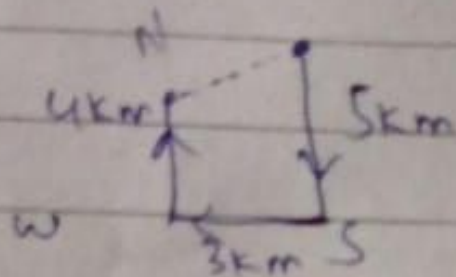
$$x = \frac{80 \times 10}{30}$$

$$x = \frac{80}{3}$$

$$x = 26$$

- (c) A cow travels South 5km, and then 3km west, and then 4km north. Find travels 2km South-east. How far is the cow from initial point?





The cow is 1 km away from initial point.

If radius of a cylinder is 10 cm and height is 36 cm. Find the volume of cylinder.

Solution,

$$r = 10 \text{ cm}$$

$$h = 36 \text{ cm}$$

Volume of cylinder = ?

$$V = 2\pi r h$$

$$= 2\pi (10)(36)$$

$$V = 2\pi (360)$$