

Dos and Don'ts for the General Science & Ability Paper
Hi there — you've prepared well! Remember, knowing the content is one thing, but presenting it in the paper exactly as required is another. Here are a few key points to keep in mind:

- MOCK TEST
- Name: Noor Fatima
- SUBJECT: GENERAL SCIENCE AND ABILITY
1. For a 5-mark part, aim to write at least 2 and at most 3 sides of the answer sheet. Often, a question has two or three parts, and the marks are divided accordingly — so address each part fairly.
 2. Manage your time wisely. You have about 35 minutes per full question, which comes down to around 8 minutes for each 5-mark part. Stick to this to avoid rushing later.
 3. Make your answers look scientific, not just theoretical. Use flowcharts and diagrams wherever they add clarity.
 4. Neatness matters — keep your handwriting clean, avoid cutting or overwriting.
 5. Mind your spelling and grammar — while GSA doesn't deduct marks for these, your expression leaves an impression.
 6. In the ability portion, explain analytical ability questions in words. For a 5-mark part, show all steps and provide clear explanations.

Here's a brief key/sample of your Ability questions

Q.6

a) Candy ratio problem

Given: Packets in flavors Apple : Berry : Cherry : Date = 3 : 6 : 2 : 5.

Asked: If Apple candies exceed Date candies by 35, how many Berry candies are there?

Note (consistency check): The ratio shows Apple

For example

Some of the organelles formed by cells for special tasks are as follows

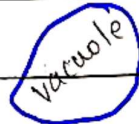
Nucleus

possess DNA
for reproduction



Vacuole

for
water
storage



Ribosomes

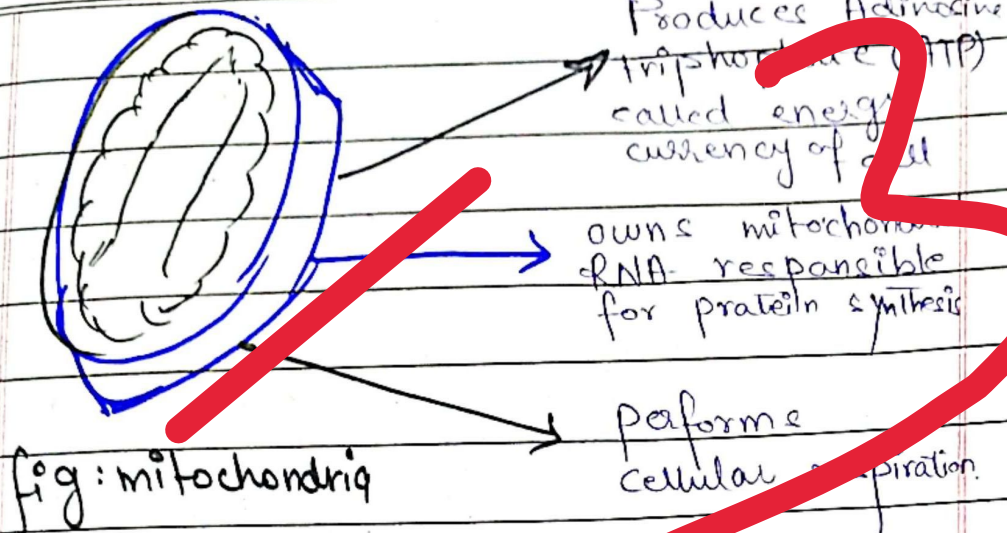
for
protein
synthesis



ii- Role of Mitochondria in human cell

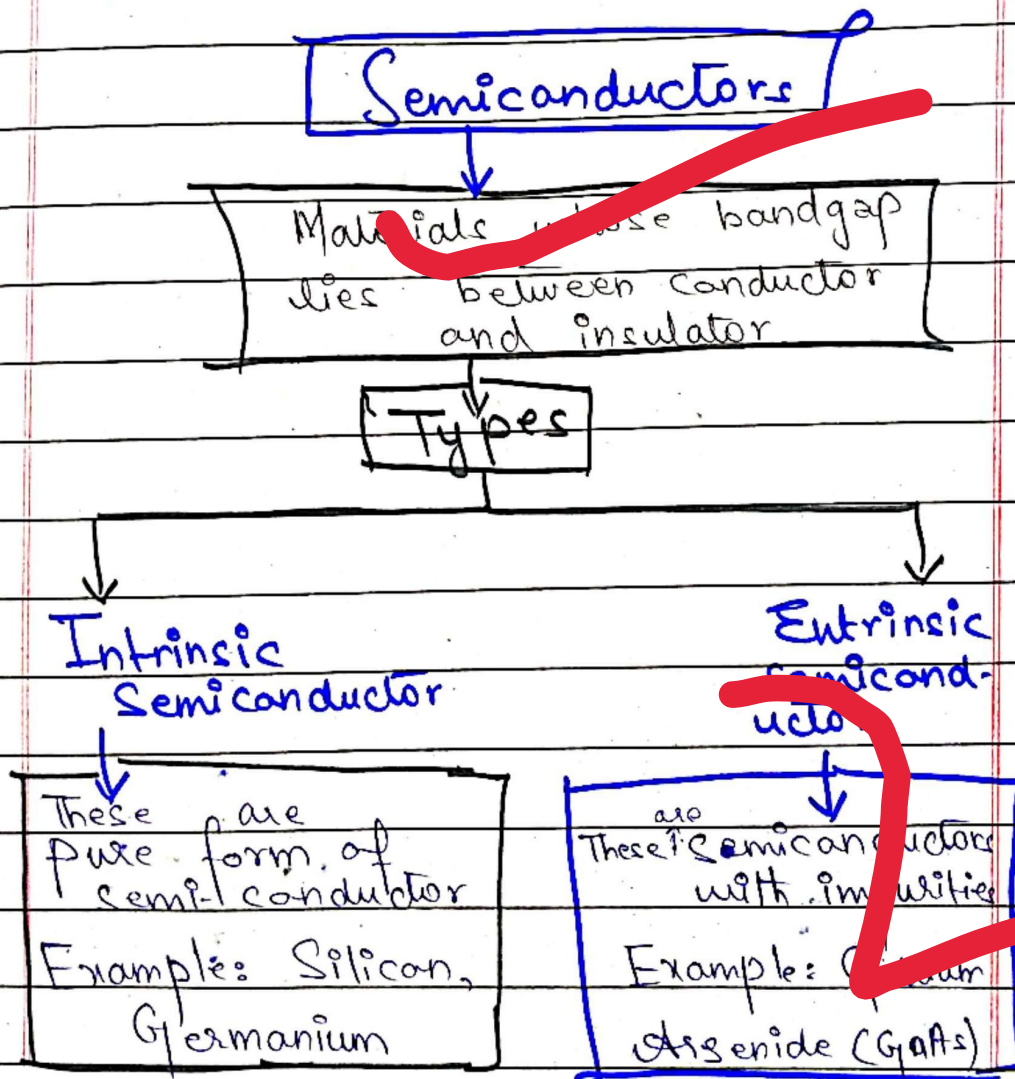
Mitochondria ~ power house of cell.

- a- an important organelle in human cell
- b- plays role in important processes



(b)

a- Semiconductors and their types.



b- Doping

Doping

It is the process of adding impurities in semi-conductors

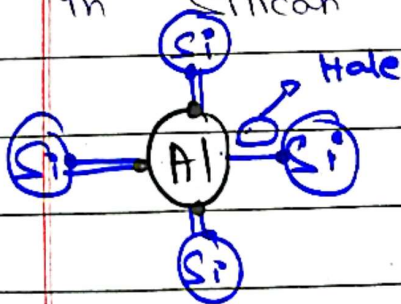
Types of Doping

p-type doping

- a- addition of trivalent (Groups 3) impurities in semi conductor.
- b- This type of doping leaves a hole

Example

Addition of Aluminium in Silicon

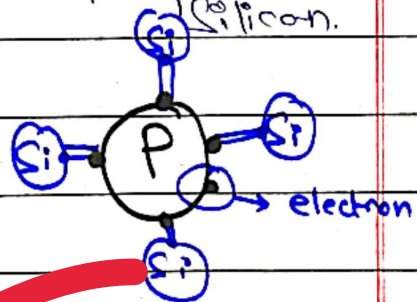


n-type doping

- a- addition of pentavalent (Groups 5) impurities in semi-conductor
- b- This type of doping leaves an electron

Example

Addition of Phosphorous in Silicon.



(c)

Volcanic Eruption

Sudden release of magma from mountains due to tectonic activity

(i)

Merits

- a- Formation of new landscapes
- b- Creation of aesthetic scenario enhances tourism opportunities as in Cappadocia, (Turkey)
- c- Provides agriculture opportunities

(ii)

Demerits

- a- Causes human loss.
- b- Causes economic loss by the destruction of infrastructure

Day: _____

Date: _____

c- Greenhouse emissions
contribute in economic
degradation
d- Causes Earthquakes
and other natural disasters

(d)

Dengue

It is a type of fever
caused by biting of dengue
mosquito

Symptoms

Temperature
rise

Pain and
loss
of muscles

Severe
cold
attacks

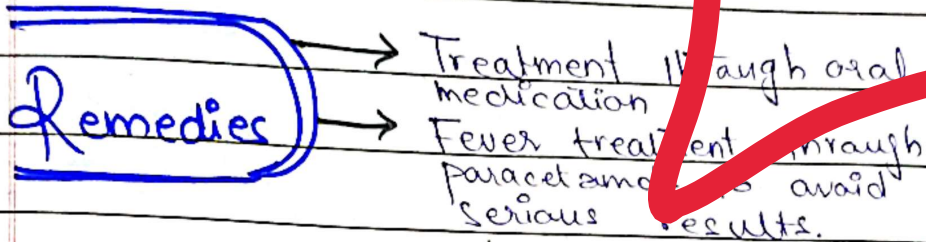
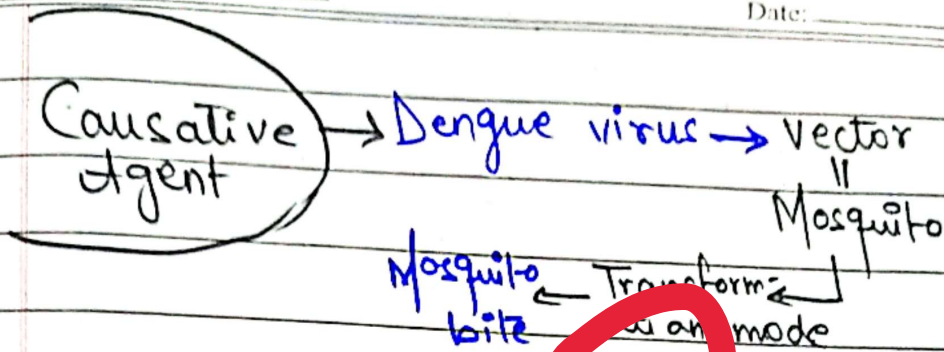
It can lead to

Paralysis

Death

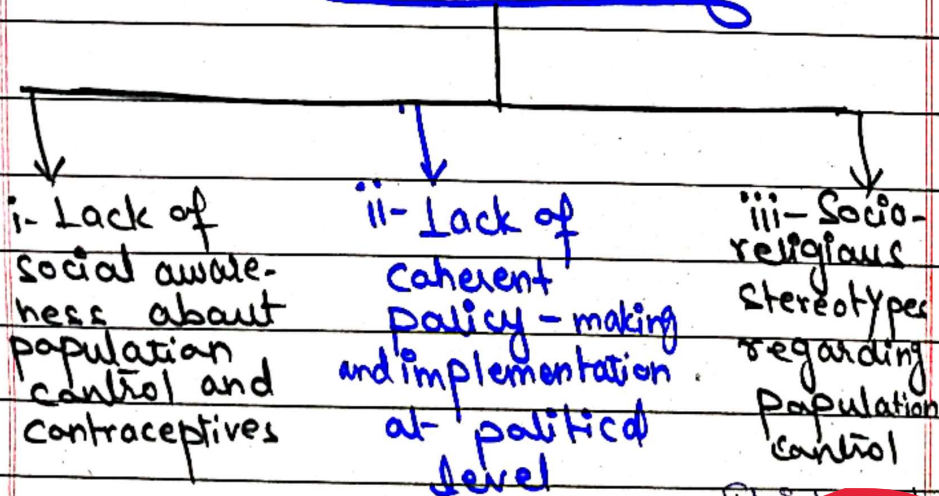
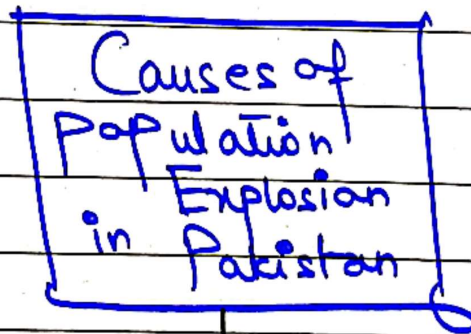
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Date: _____



(Q No. 5)

(a)



of Strict
of society and
early marriage
bill (Dawn)

Causes

iv- Economic exploitation of children for economic gains inhibit population control.

Pakistan is third largest country regarding child labour (ILO Report)

v- Lack of Gynae health facilities in rural areas

60% of rural areas does not have lady health workers in Pakistan (PIDF policy Brief)

Measures to control population explosion

Seminars, webinars and social media campaign can educate people about population control

A uniform policy is required at political level for population control. China's population control policy is a successful case study.

Role of clergy and influencers in breaking population-based stereotypes is essential.

Eradication of urban-rural divide is necessary to provide population control aid.

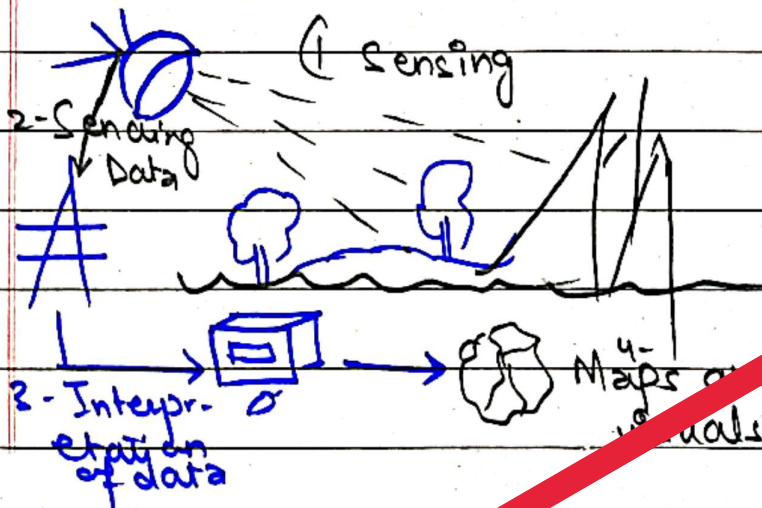
(b)

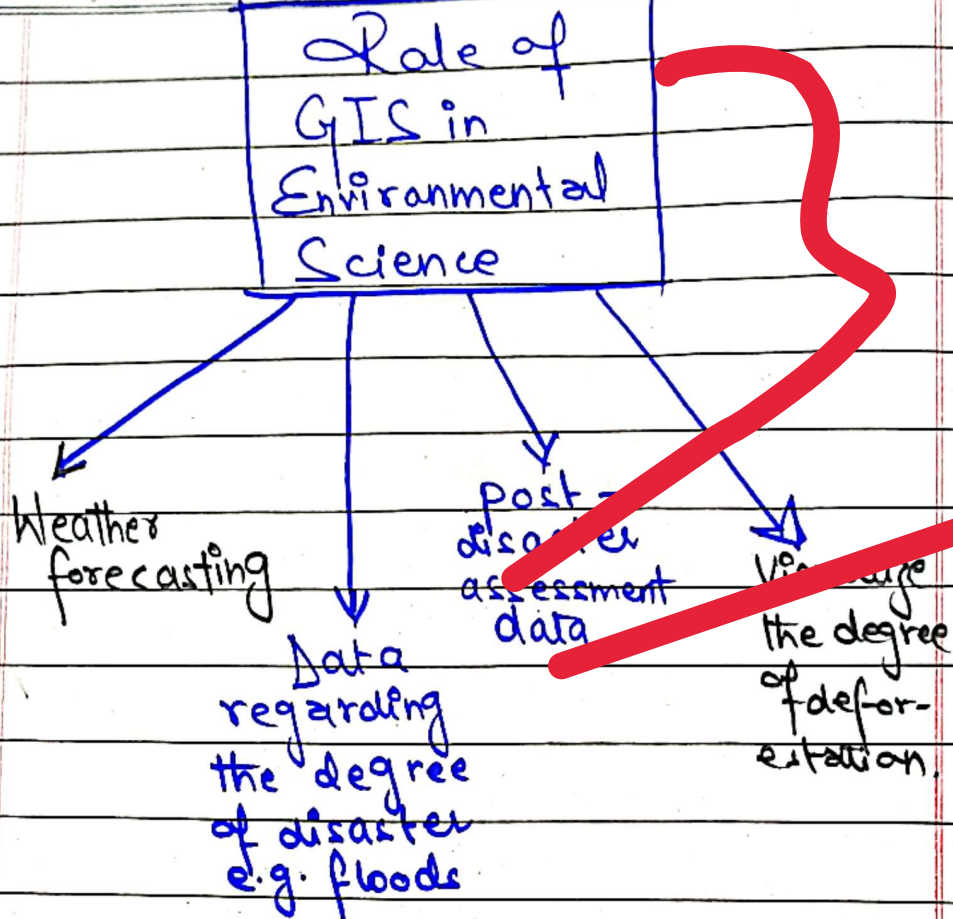
Remote Sensing

It is defined as the use of satellites to gather information about Earth through satellites.

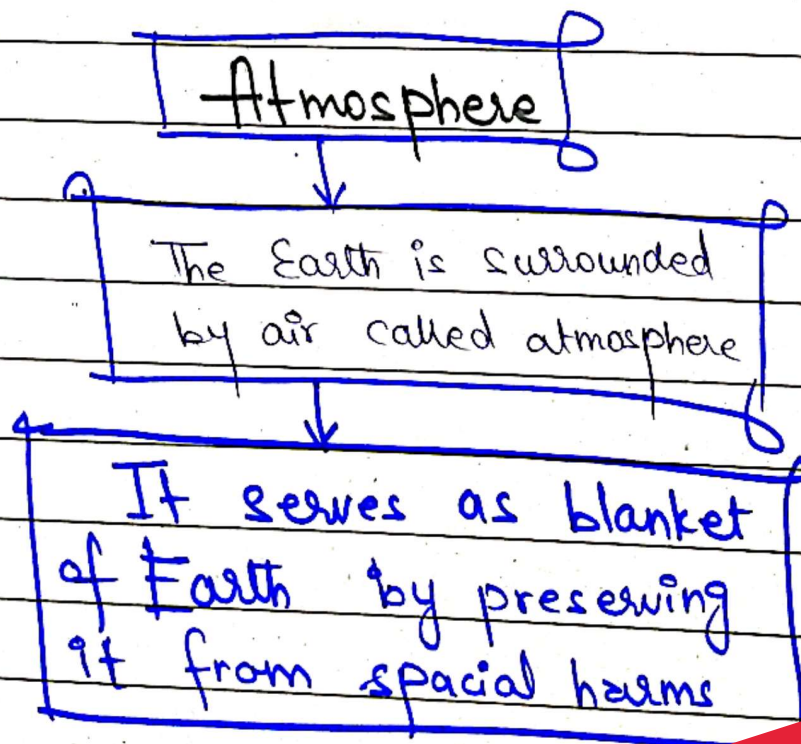
The information gathered by remote sensing is analyzed, interpreted and presented in the form of map and visuals.

The whole system is known as **Geo Information satellite**.





(c)

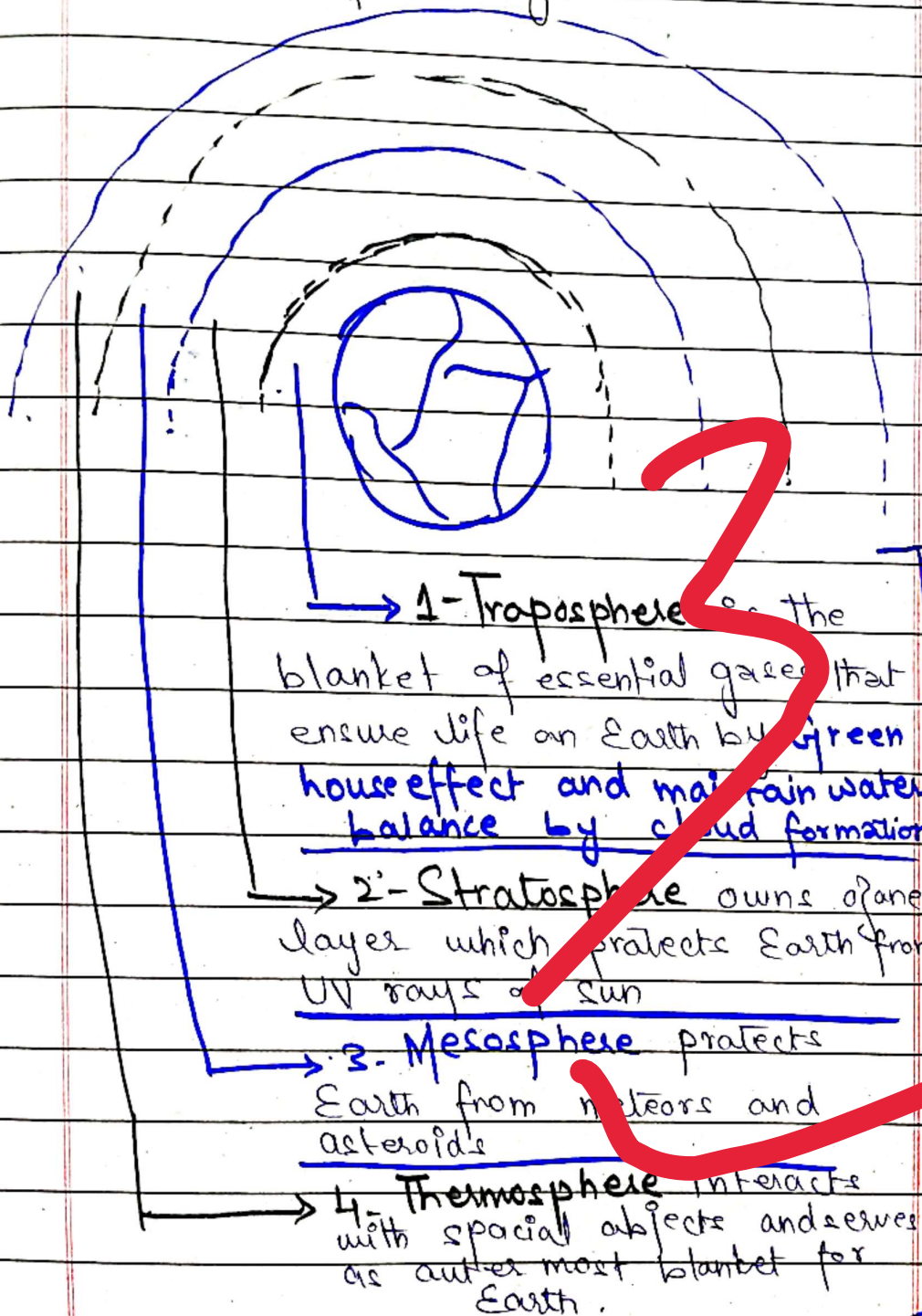


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Date: _____

Justification:

Atmosphere is made up of four layers, each of which play crucial role in preserving Earth.



In this way, Atmosphere serves as blanket of Earth.

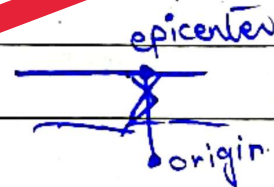
(d)

i) Hydrometer:

It is an instrument used to measure the density of liquids.

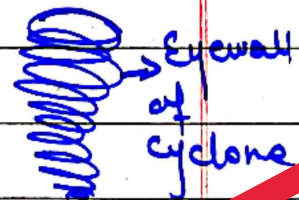
ii) Epicenter:

It is the point vertically parallel to the origin of Earthquake. It bears the highest effect of Earthquake.



iii) Eyewall of cyclone:

The fast motion of wind produces a circular appearance with hollow center. The apparent wall of wind in cyclone is called eyewall of cyclone.



iv) Deep focus:

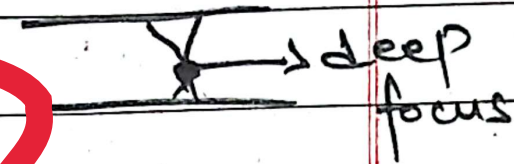
It is the point where the cracking movement of tectonic plates

4)

Day: _____

Date: _____

give birth to the Earthquake.



v) Light year:

It is the measure of distance that light covers in an year. It is used to measure the distance between astronomical bodies



SECTION-II

(Q No. 7)

(a)

Step 1: Formula for volume of sphere

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

Step 2: Calculate ~~radius~~ from given diameter

$$D = 14 \text{ cm}$$

$$r = \frac{D}{2} = \frac{14 \text{ cm}}{2} = \boxed{7 \text{ cm}}$$

Step 3: Calculate Volume of Sphere

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

$$= \frac{4}{3} \binom{22}{1} (7)^3$$

$$= \frac{4}{3} \left(\frac{1}{4} \right) \left(\frac{49}{343} \right)$$

$$= \frac{4}{3} (1018) \quad 4312$$

$$= 1437.33 \text{ cm}$$

Result: The volume of sphere is 1437.33 cm^3

Row

$$\begin{array}{r} \textcircled{6} \\ 49 \\ \times 7 \\ \hline 343 \end{array}$$

~~$$\begin{array}{r} 49 \\ \times 2 \\ \hline 98 \\ 98 \\ \hline 1078 \end{array}$$~~

Day: _____

Date: _____

(b)

Step 1: Calculate the total share

$$\text{Sum of ratios} = 5 + 4 + 3 + 2 + 1 = 15$$

Step 2: Get the single share

$$\text{Single share} = \frac{25000}{15} = 1666.66$$

Step 3: Calculate the shares of each friend individually.

$$F_1 \text{ Ratio 1} = 1666.66 \times 1 = 1666.66$$

$$F_2 \text{ Ratio 2} = 1666.66 \times 2 = 3333.32$$

$$F_3 \text{ Ratio 3} = 1666.66 \times 3 = 4999.98$$

$$F_4 \text{ Ratio 4} = 1666.66 \times 4 = 6666.64$$

$$F_5 \text{ Ratio 5} = 1666.66 \times 5 = 8333.3$$

So the friend with ratio 1 has smallest share

(c)

(ii) 3, 5, 7, 11, 13, _____

✓ Step 1: Calculate the difference between each number

$$5 - 3 = 2$$

$$7 - 5 = 2$$

$$11 - 7 = 4$$

$$13 - 11 = 2$$

Step 2: Identify trend

As the trend moves 2, 2, 4, 2, the next number will be achieved by adding 2 in 13

$$13 + 2 = 15$$

Step 3: Complete series

3, 5, 7, 11, 13, 15

(ii) 2, 6, 18, 54, 162, 486 (spot the error)

Step 1: Identify series pattern to spot the error

$$2 \times 3 = 6$$

$$6 \times 3 = 18$$

$$18 \times 3 = 54$$

$$54 \times 3 = 162$$

$$162 \times 3 = 486$$

Step 2: Spot the error

The series has continued the pattern.

Therefore, all the numbers fit the series

Q No. 6(b)

Step 1: Devise the formula for total amount

Step 1: Devise the formula for total amount

$$= 200 + 25\% + 6\%$$

Step 2: Simplify the percentages and solve the formula

$$= 200 - \frac{1}{4} + \frac{3}{50}$$

$$T.A = 2000 - 25 + 6$$

$$= \frac{1969}{100} = 19.69$$

Total amount paid is \$ 109.69



(c)

Step 1: Mention the data

$$\text{Distance} = d = 36 \text{ km}$$

$$\text{Speed} = S = 18 \text{ km/h}$$

Find the time = $t = ?$

Step 2: Write the formula for time

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

$$\text{Time (t)} = \frac{\text{Dist. (D)}}{\text{Speed (S)}}$$

Step 3: Add values and calculate time

$$t = \frac{36}{18} = 2 \text{ h}$$

The time taken to reach is 2 hours.

Day: _____

Date: _____

(d)

i) ~~STSTATISTICS:~~

STATISTICS

ii) LGEBMAR:

GRAMBLE