

Dos and Don'ts for General Science & Ability Paper

Hi there, you've done well. Know that acquiring knowledge is one thing and reproducing it in paper according to what's asked is another. There are a few things I would like to highlight.

Q No 3

a)

1. A 5 marks part requires at least 2 and at max 3 sides of a paper. Know that there can be two or three parts of a question and their marks are divided accordingly. So, address all of them in a just manner.

2. Focus on time management. You get 35 minutes to solve one question and about 8 minutes per 5 mark part. Manage your time accordingly.

3. You need to understand that your paper is supposed to look more scientific than theoretical. So, add flowcharts and diagrams where required.

4. Your handwriting and neatness can be really impactful. Avoid cutting and overwriting.

5. Focus on your spellings and your grammar.

Here, in GSA there's no deduction in marks but your expression will definitely create an impact.

6. In ability portion, give explanation for analytical ability question in words. You need to understand that a 5 mark part requires all steps written and explained.

Good luck for CSS 2025. You're gonna rock in sha Allah. :)

atoms is called covalent bond"

In this type of bonding sharing of e^- took place.
For example:

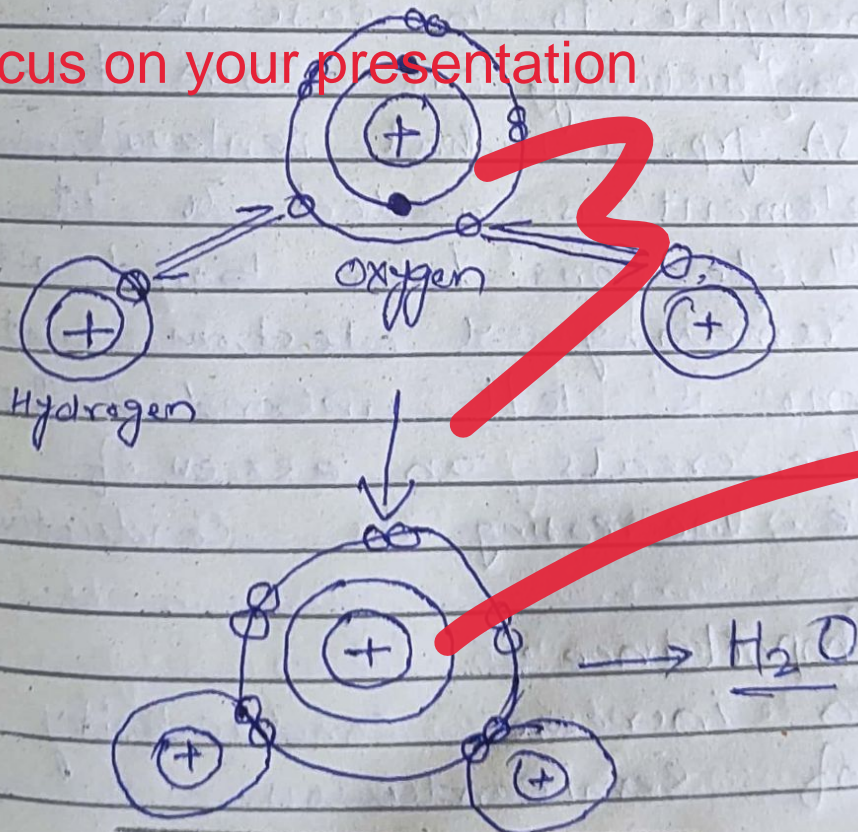
Water (H_2O).

O have 6 valence e^- . To fill its valence shell, it must gain $2e^-$, to attain stable number of $8e^-$.

On other hand, Hydrogen have 1 valence e^- , To achieve stable state, it must gain $1e^-$, to achieve $2e^-$.

Therefore, both atoms come together to share e^- to achieve their desired state.

Focus on your presentation



and heated to an ~~ice~~
that it's insububle is water

c) Answer:

Global Warming:

"The increase in average global temperature is called global warming."

Merits of Global warming:

i) Decrease in mortality from cold waves:

The inc. in temperature can help to overcome the mortality rates in northern hemisphere due to cold waves.

ii) Early Spring:

The increase in global temperature means early arrival of springs, which allow farmers more time to grow crops.

iii) New trade routes:

The melting of Arctic ~~ice~~ is opening new trade routes in the northern hemisphere.

Demerits of Global Warming:

i) Floods:

Increase in global temp. results in melting of glaciers and intense in rains result in intense flooding. For example, Pakistan faced serious flooding in 2022.

ii) Rising sea levels:

Due to melting of snow caps and melting glaciers the sea levels are rising. which means the coastal population is under threat. For instance, Indonesia is building new capital to move their coastal capital, Jakarta.

iii) Heat waves:

Another major demerit of global warming, is increasing heat waves which is a direct threat to human life. During Hajj pilgrimage 2024, 1000 people died due to intense heat.

ii) Wild fires:

Heat waves result in intense wild fires. In recent years, we witness intense fire breakouts in forests around the world. From Australia to Turkey to Canada every part of world witness wild-fires.

Not required

Critical Analysis:

The demerits of global warming outface the merits. The merits of global warming are short-term and confine to some regions, while the demerits have threatened human life on earth.

1) Answer:

Polio:

Viral infectious disease caused by Polio virus.

Symptom:

→ Fever, aches

→ In acute stages, polio-myelitis cause the

paralysis of one or 2 limbs,

Prevention:

→ Polio virus vaccine.

Risk factors:

→ Flawed water & sanitation system.

→ no access to vaccines.

Challenges to eradication of Polio in Pakistan:

1) Worst sanitation system:

One of the major factor responsible for spread of polio in Pakistan is its worst sanitation system. This allow the polio to breed and spread to other population.

2) Vaccination barriers:

There are certain barriers to vaccination in Pakistan. The religious misinterpretation results in creating a problem in masses. Moreover, the target killing of polio workers

also hampered the process of polio.

iii) Non-Serious behaviour of Parents:

It's the duty of parents to safeguard their child from life threatening disease. But they create hurdles and believe in conspiracy theory expose their child to ~~cont~~ viral infection.

iv) Over-population:

Pakistan is also facing serious population growth. Which results in over congestion and poor governance it's therefore difficult for the under staffed health sector to cater the masses.

Q no 4

a) Answer:

Bile:

A chemical secretion produced by liver is called ~~cont~~ Bile.

Storage:

→ Bile store in gall bladder located in abdominal cavity, under liver.

Composition: **Add diagram with proper labeling**

→ Bile is mostly consists of salts.

Secretion Area:

→ It secretes in duodenum the first part of small intestine.

Function:

→ 1) Neutralisation: one of the major function of bile is neutralisation of acidic chyme receive from stomach.

→ 2) Emulsification: another important role of bile is the degradation and washing away of fats and lipids.

Answer:

Role of kidney in excretion.

Kidney is one of

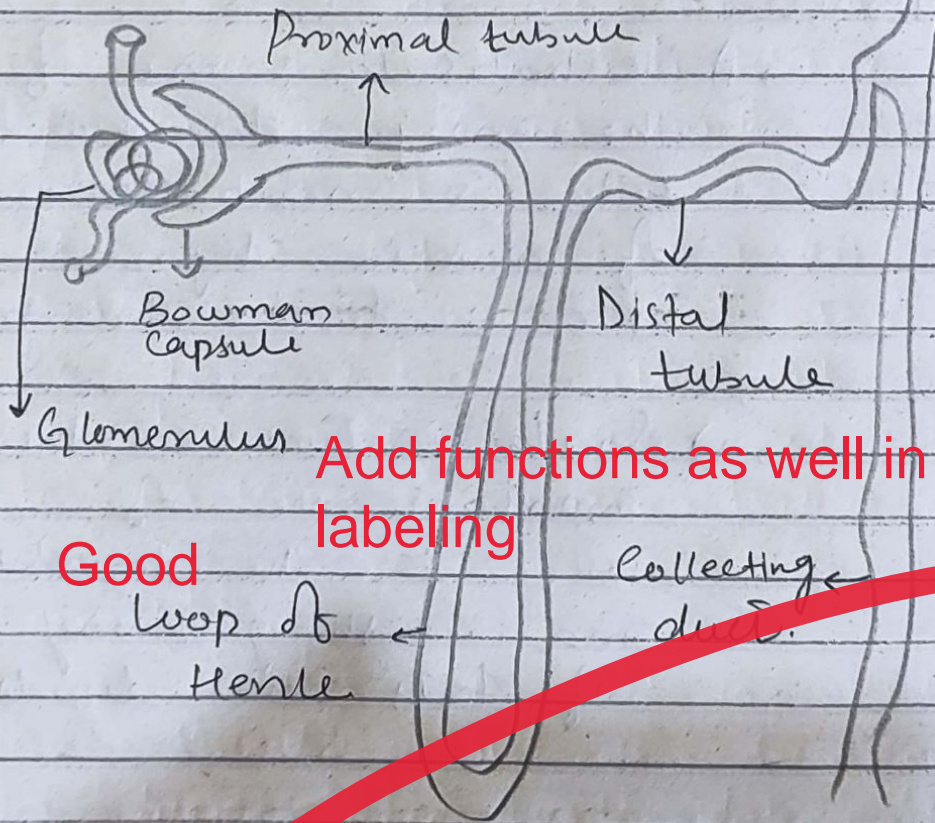
the major excretory organ in human body. Kidney is made up of Nephrons. These nephrons are responsible for filtering and cleaning human blood, removing excretion

Structure of Nephron:

Consists of

2 major parts.

- i) Renal Corpuscular
- ii) Renal tubular.



Add functions as well in the labeling

Good

Glomerulus The blood filters at this stage. Due to high pressure all the plasma filter out.

Bowman Capsule It catches the filtrate absorb majority of portion but large molecules and cells are stop.

Renal tubules: They reabsorb the essential nutrients and excess the in the filtrate and unwanted material is removed through collecting duct.

Answers:

Methods of solid waste management:

1) Incineration:

The process by which the solid waste, particularly medical solid waste, is burned at high temperature in controlled environment.

2)

~~Energy~~

Waste To Energy:

On this process, waste is converted into beneficial heat, which is then utilize to produce energy. This method is practice in most of developed world and some parts of developing world.

3)

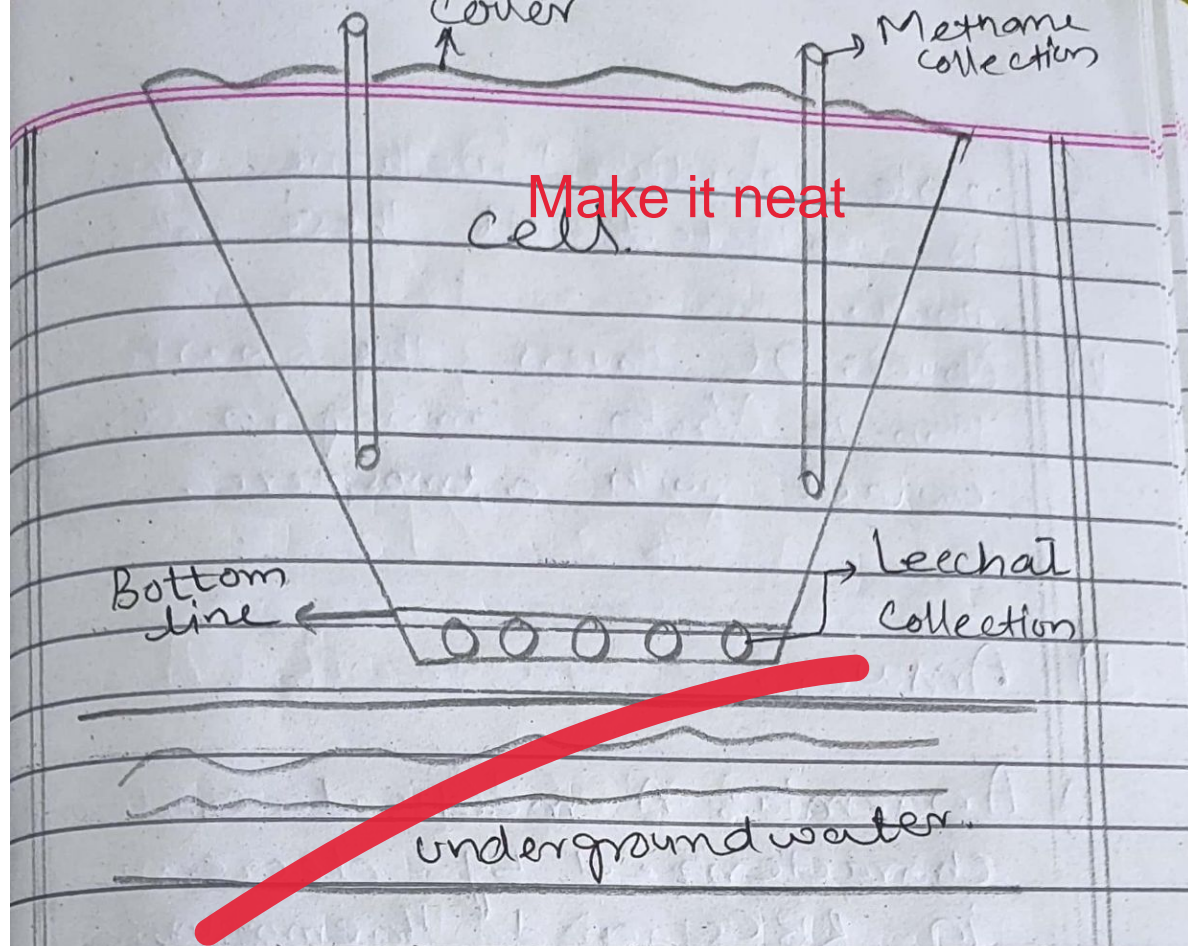
Composites

The organic waste is converted to fertilizer by treating them with certain chemicals. It can be perform at home, by utilizing kitchen waste which can be used for gardens and also at large scale it can utilize to produce organic fertilizers.

4)

Landfill:

The process in which the solid waste is dumped in open space in controlled environment. It is least preferred but mostly practised method of depositing solid waste.



Make it neat

Fig: Landfill site

Parts of Landfill:

- i) Bottom line: It separates site from underground water. made of solid concrete and some other chemicals.
- ii) Leachate collection: sludge, semi solid waste formed out of solid waste is collected through collection pipes.
- iii) Cells: This is where solid waste is dumped.
- iv) Methane collection: The solid

waste produce methane which is collected at these collection point.

v) Covers: It covers the waste, to stop it from coming in direct contact with atmosphere.

d) Answer: **Proper explanation is required**

i) Anaemia: A medical condition characterized by decrease in RBCs and haemoglobin.

ii) Appendicitis: Inflammation of Appendix, a small portion connected with large intestine, is called appendicitis.

iii) Spleen: A lymphatic system organ located in abdominal cavity help to combat antigens through production of WBCs.

Add diagrams

iv) Myopia: Also called short-sightedness, is an eyesight disorder characterized by difficulty to clearly see objects at distance.

Section #10.

Answer:

Given data:

$$A:B:C:D = 4:7:3:1$$

$$A = 50 + C.$$

Required:

The number of
"B" blocks = ?

Solution:

As given:

$$A = 50 + C$$

$$\text{let } C = x. \quad \text{--- (i)}$$

$$A = 50 + x \quad \text{--- (ii)}$$

As given;

$$A:C = 4:3$$

So

$$A/C = 4/3 \quad \text{--- (iii)}$$

Put (i) and (ii) in (iii)

$$\frac{x+50}{x} = \frac{4}{3}$$

$$4x = 3x + 150$$

$$x = 150$$

Put in eq (iii)

$$A = 50 + 150$$
$$A = 200.$$

Now

$$A : B = 4 : 7$$

$$A/B = 4/7 \quad \leftarrow \text{iv}$$

Put value of A in (iv)

$$\frac{200}{B} = \frac{4}{7}$$

$$\frac{350}{\cancel{1400}} = \frac{4}{\cancel{4}} B$$

$$\boxed{B = 350}$$

~~Result:~~ Result:

No. of B-blocks
are 350.

5) Given:

Original cost = \$80

Discount = 15%

Sale = 10%

Required:

Final price = ?

Solution:

Price after discount.

$$= \frac{15}{100} \times 80$$

$$= 12$$

So price will be after discount

$$80 - 12 = \boxed{68}$$

Now price after sale tax.

$$= \frac{10}{100} \times 68$$

$$= 6.8$$

So price will be

$$68 + 6.8 = \boxed{74.8}$$

Conclusion:

The final price of shoe will be 74.8.

c) Given data:

Distance = 42 km

Speed = 36 km/hr

Req:

Time = ?

Soln:

As we know that

$$S = D/t$$

$$t = D/S$$

$$t = \frac{42}{36}$$

$$t = 1.16$$

Conclusion:

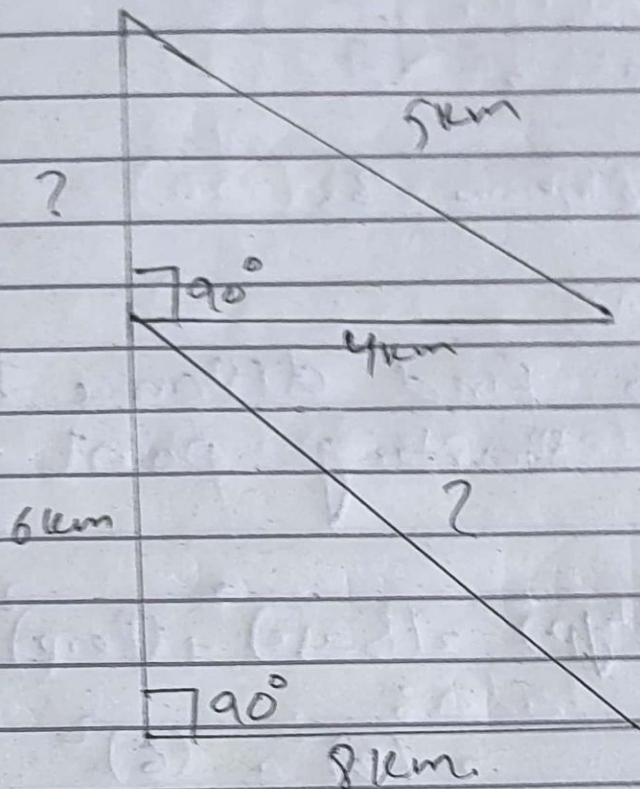
So, train will arrive at 4:16 pm.

d) Answer:

i) Superintendent

ii) White

Given:



Req:

How long he travelled?

How far from starting point?

Solution:

First, we have to find the perp of first triangle.

$$\text{Perp}^2 = \text{Hyp}^2 - \text{Base}^2$$

$$\text{Perp}^2 = (5)^2 - (4)^2$$

$$\text{Perp}^2 = 25 - 16$$

$$\sqrt{\text{Perp}^2} = \sqrt{9}$$

$$\text{Perp} = 3$$

Now,

To find distance from starting point.

$$(\text{Hyp})^2 = (\text{Base})^2 + (\text{Perp})^2$$

$$= (8)^2 + (6)^2$$

$$= 64 + 36$$

$$= \sqrt{100}$$

$$\boxed{\text{Hyp} = 10}$$

Now, To calculate total distance traveled.

$$4 + 5 + 3 + 6 + 8 + 10 = \boxed{35}$$

Result:

Total distance = 35 km

Distance from

starting point = 10 km

Given:

Total amount = 8000

Haman = $\frac{1}{3}$ Ali

Ali = 5 Akbar

Akbar = 3 Nasir

Nasir = Shehbaz

Req:

Shares of each = ?

Soln:

Let Nasir share be
(x)

So

Nasir = x

Shehbaz = x

Akbar = $3x$

Ali = $15x$

Haman = $5x$

Total Shares = $25x$

$$25x = 8000$$

$$x = \frac{8000}{25}$$

$$x = 320$$

So

$$\text{Najir} = 320$$

$$\text{Shekhar} = 320$$

$$\text{Akbar} = 3(320) = 960$$

$$\text{Ali} = 15(320) = 4800$$

$$\text{Hanan} = 15(320) = 4800$$

d) Answer
Given data:

$$\text{Total amount} = 4320.$$

$$\text{Zain} = 2n$$

$$\text{Aslam} = 3n$$

$$\text{Asmat} = 7n.$$

Key:

Distribution of amount.

Soln:

So total shares
are

$$12$$

$$12n = 4320$$

$$n = \frac{4320}{12} = 360$$

$$\text{Zain} = 2(360) = 720$$

$$\text{Aslam} = 3(360) = 1080$$

$$\text{Ashraf} = 7(360) = 2520$$

c) Answer.

Given

$$\text{radius} = 7\text{m}$$

Req:

$$\text{Surf area} = A = ?$$

$$\text{volume} = V = ?$$

Soln:

As we know that

$$\text{Area of sphere} = 4\pi r^2$$

$$= 4(3.14)(7)^2$$

$$= 4(3.14)(49)$$

$$= (12.5)(49)$$

$$= 615.4$$

Now

Volume of sphere

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

$$= \frac{4}{3} (3 \cdot 14) (7)^3$$

$$= (4 \cdot 18) (343)$$

$$= 1433.74$$