

DATE: 27-08-2025

Dos and Don'ts for the General Science & Ability Paper

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Section 1

Q.No. 02

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:

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.

Good luck for CSS 2026 — you're going to ace it, in sha Allah! 🌟

Cell:- Cell is the functional unit of living organisms. A cell consists of various parts these parts are called organelles.

Parts of cells:-

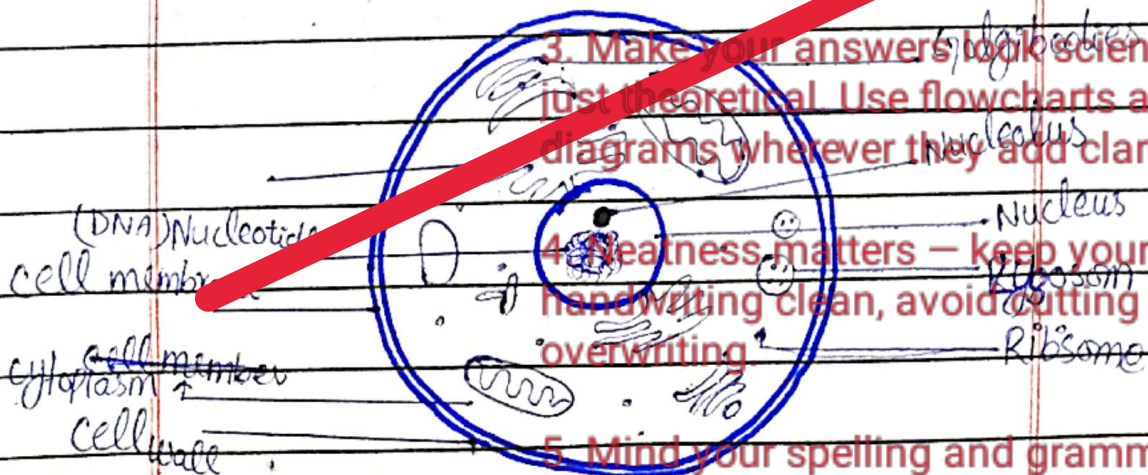


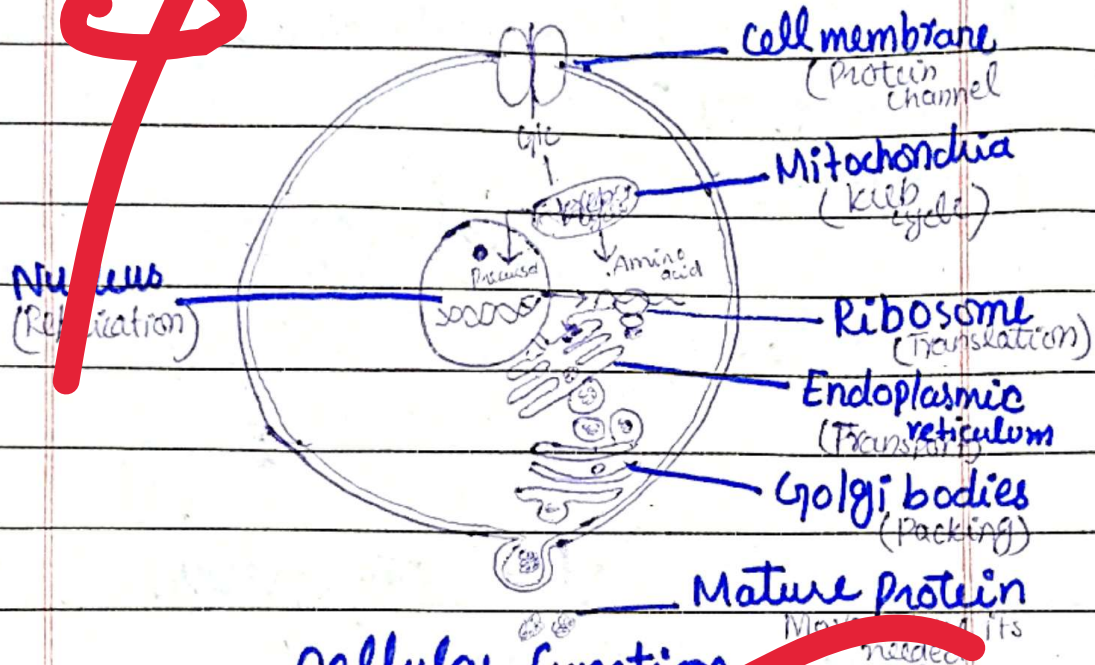
Fig: Component of a cell

Cellular Function: Various component of cells functions together to maintain the function of cells. For example energy

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Production, Protein synthesis
Water balance.



Cellular function

Eukaryotic cell

This cell have a prominent nucleus
enclose the genetic material

For example: Plant cell, Animal cell

Prokaryotic cell

This cell does not have prominent nucleus and genetic material scattered into cytoplasm.

For example: Bacterial cell

To maintain Homeostasis:-

Homeostasis means to stable the cell temperature when in response to changing external

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Environment. Cells respond to the external stimuli by using receptors and feedback loop. In Homeostasis use the -ve feedback loop. Receptor send information to the integrating center then this pass the signals effector like sweat glands if temperature rise.

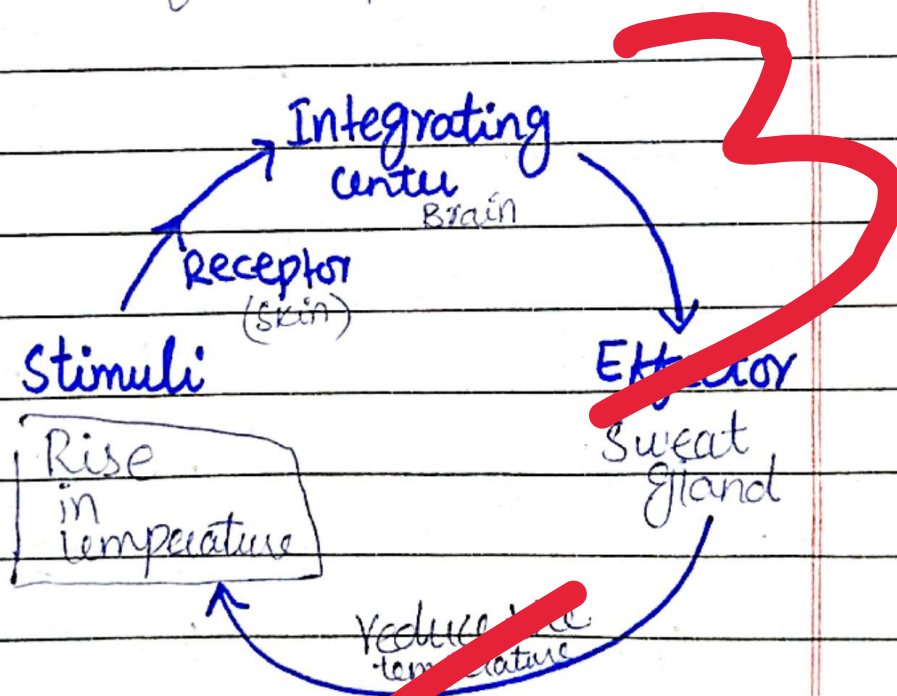
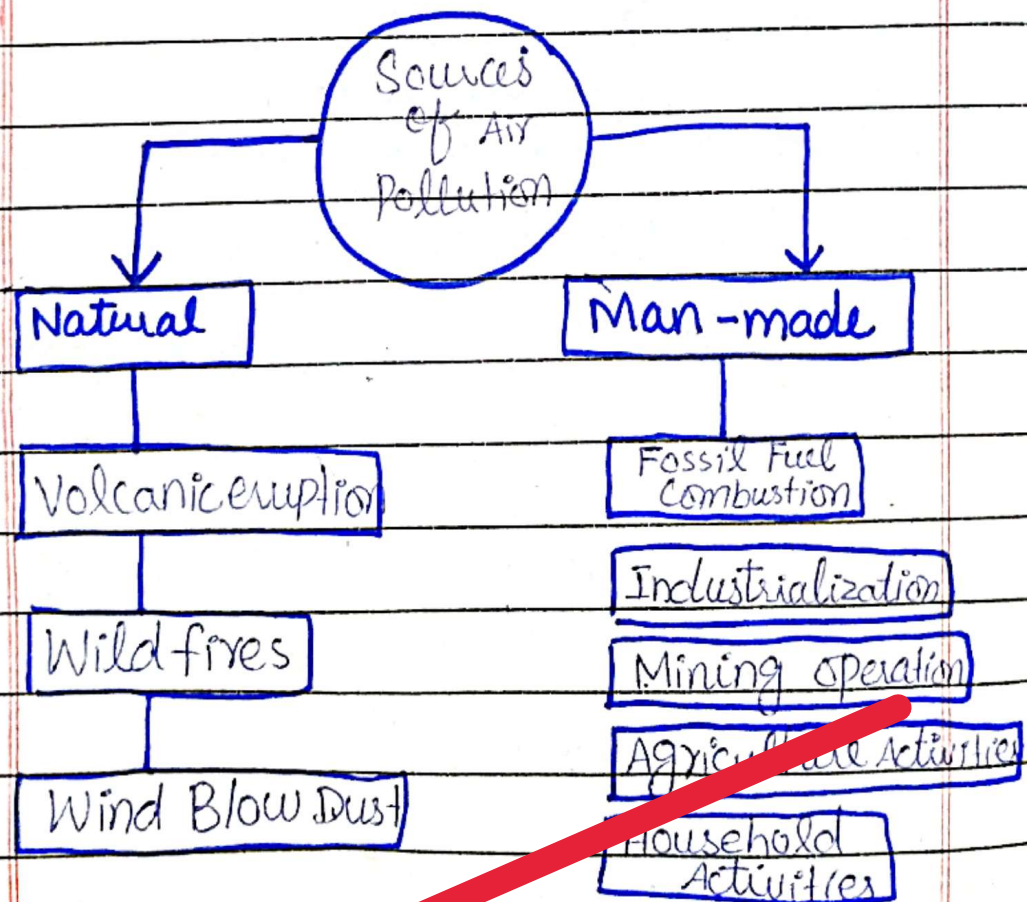
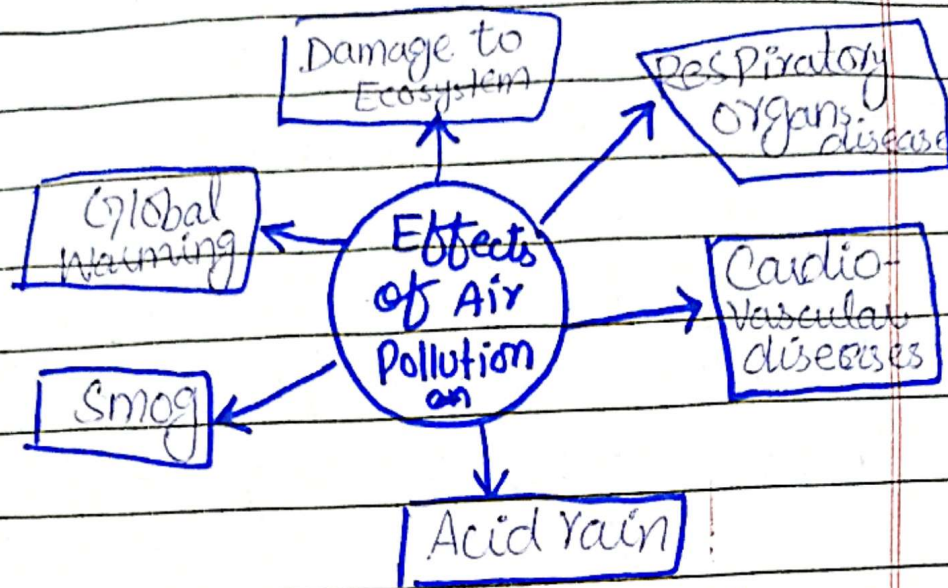


Fig: Homeostasis

Q. No 2d

Air pollution:- The presence of substances in the the air that are harmful to humans, other living organisms or the environment is called air pollution. These harmful substance called Pollutant.

Sources of Air pollution

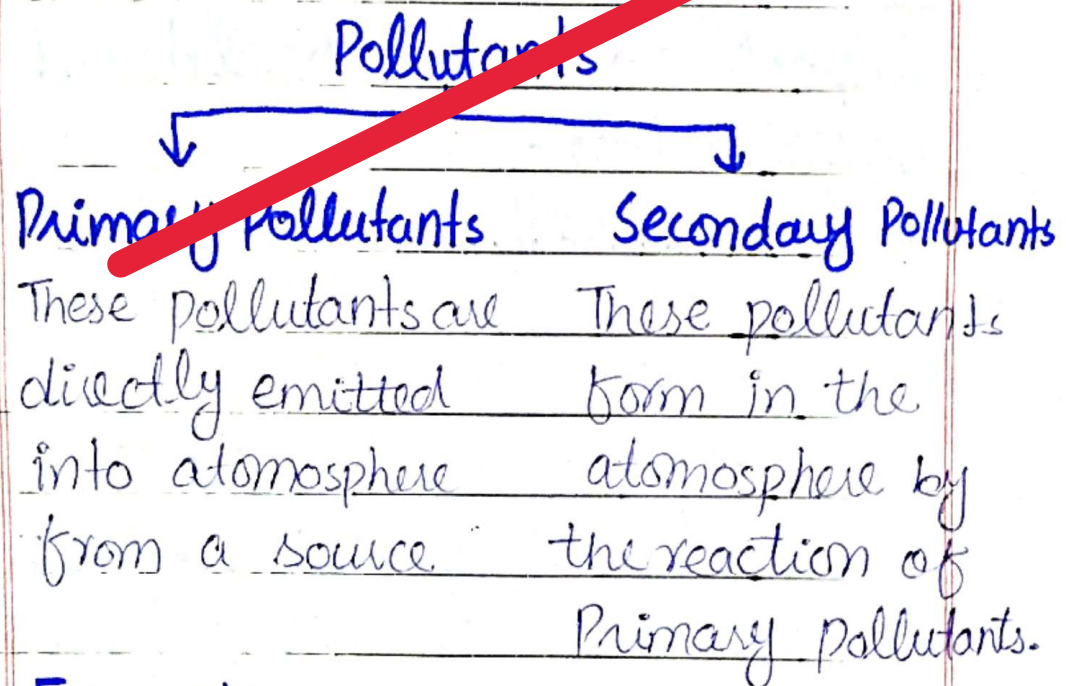


Impact on Human health and Environment:-

Human Health: Air pollution increases the risk of conditions of respiratory issues like Asthma, Pneumonia, Chronic obstructive pulmonary disease and lung cancer. Risk ^{due to} of air pollution also include cardiovascular issues.

Environment:- Air pollution cause the Acid rain that contain ~~excess~~ sulfur dioxide and acid which damages the forest lakes, and building

Combination of Primary pollutants and sunlight creates smog that reduce the visibility. Air pollution includes the greenhouse gases that increase the temperature result in Global warming & climate change.



Examples:

- | | |
|-------------------------|---------------------------------|
| i) Carbon Monoxide | i) Ground level ozone (O_3) |
| ii) Sulfur dioxide | ii) Photochemical smog |
| iii) Particulate matter | |

Reduction of Air Pollution

1) Individual Actions & Collective Actions

Sustainable transport: prefer

Walk, cycling, public transport or electric vehicles to reduce emissions.

Energy conservation:- Reduce the energy consumption at home by using energy efficient appliances or use green energy like solar panels.

Proper Waste Management:- Make sure proper disposal of household waste to prevent release of harmful substances into air and

Avoid burning of waste

Green Spaces: Plant more trees to absorb pollutants and produce oxygen

Reduce, Reuse, Recycle (3R) practice the 3Rs to reduce waste and air pollution associated with landfills.

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Section II

Q # 07

7(b)i: 53, 53, 40, 40, 27, 13, 13

7(b)ii: 14, 28, 20, 40, 32, 64, 5, 100

7(b)iii: 8, 9, 23, 87, 439

7(b)iv: B, F, R, B

7(b)v: V, U, W, V, X, W, Y

$$11-2=6$$

$$6 \times 2 - 3 = 9$$

$$B=2$$

$$F=6$$

$$R=18$$

Q # 7C

Given

20% of $a = b$ then $b\%$ of 20 = ?% of a

Solve: let $b\%$ of 20 = $x\%$ of a

$$= \frac{20}{100} a = b$$

$$= \frac{1}{5} a = b$$

$$= b = \frac{1}{5} a \quad \text{--- (1)}$$

$$= \frac{b \times 20}{100} = x \quad \text{--- (2)}$$

Put value of b into equ 2

$$= \frac{\frac{1}{5} a \times 20}{100} = x$$

$$= \frac{a}{100 \times 5} \times 20 = a \times \frac{4}{100} = x$$

$$\begin{array}{r} 54 \\ 26 \\ \hline 28 \end{array}$$

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$$4\% \text{ of } a = 6\% \text{ of } 20$$

Q # 7a

Solve

Let ten's of two digit number = x
 = Unit digit exceed it ten's digit
 by 2 then

$$= \text{Unit digit} = x + 2$$

$$= \text{Given number will be} = 10x + (x + 2)$$

$$= 11x + 2$$

$$= \text{Product of Sum of digits} = x + x + 2$$

$$= 2x + 2$$

$$= \text{Product of Given number and Sum of digits} = (11x + 2)(2x + 2) = 144$$

$$= 22x^2 + 22x + 4x + 4 = 144$$

$$= 22x^2 + 26x + 4 = 144$$

$$= 22x^2 + 26x + 4 - 144 = 0$$

$$= 22x^2 + 26x - 140 = 0$$

By using Quadratic formula

$$= \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$a = 22$$

$$b = 26$$

$$c = -140$$

$$= \frac{-(26) \pm \sqrt{(26)^2 - 4(22)(-140)}}{2(22)}$$

$$= \frac{-26 \pm \sqrt{676 + 12320}}{44}$$

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$$= \frac{-26 \pm 114}{44}$$

$$= \frac{-26 - 114}{44} = \frac{-140}{44}$$

$$x = \frac{-26 + 114}{44} = \frac{88}{44} = 2$$

if $x = 2$ then

$$\text{digit} = 11(2) + 2 = 24$$

Question # 7d

Solve:

Let the age of Father = x and
age of Son = y

Age of Father 10 years ago = $x - 10$

" " Son " " " = $y - 10$

According to Give information

$$x - 10 = 3(y - 10) \quad \text{--- } x = 3y - 20$$

Ten year hence father age = $x + 10$

" " " Son age = $y + 10$

$$x + 10 = 2(y + 10)$$

$$x = 2y + 20 - 10$$

$$x = 2y + 10 \quad \text{--- (2)}$$

$$x - 10 = 3y - 30$$

$$x = 3y - 20$$

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Put value of x into eqn 2

$$3y - 2x = 2y + 10$$

$$3y - 2y = 10 + 20$$

$$y = 30 \quad \text{--- (3)}$$

~~$$x = 3(30)$$~~

~~$$y = 10 \quad x = 30$$~~

Put the value of y into

eqn 2

~~$$x = 2(30) + 10$$~~

~~$$x = 60 + 10$$~~

~~$$x = 70$$~~

$$\text{Ratio of } x \text{ \& } y = \frac{x}{y} = \frac{70}{30}$$

$$= \frac{x}{y} = \frac{7}{3}$$

$$\boxed{x:y = 7:3}$$

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Q. No. 5

a) solve: Let numbers are

$$= 6x+1 \quad \text{--- (1)}$$

$$= 6x-1 \quad \text{--- (2)}$$

$$= 6x+1 \quad \text{--- (3)}$$

$$= 6x+1+6x-1+6x+1 = 187$$

$$18x+1 = 187$$

$$18x = 187-1$$

$$18x = 186$$

$$x = \frac{186}{18} = 10.3 \sim 10$$

Put value of x in eqn 1, 2, 3

$$- 6(10)+1 = 61$$

$$- 6(10)-1 = 59$$

$$6(11)+1 = 66$$

So three numbers are 59, 61, 66

b) solve: Let

Positive number = x

$$\text{When } x+17 = 60 \times \frac{1}{x}$$

$$= x(x+17) = 60$$

$$= x^2 + 17x = 60$$

$$= x^2 + 17x - 60 = 0$$

$$x^2 + 20x - 3x - 60 = 0$$

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$$= x^2 - 3x + 20x - 60 = 0$$

$$= x(x-3) + 20(x-3) = 0$$

$$= (x+20)(x-3) = 0$$

$$x+20=0, \quad x-3=0$$

$$x = -20$$

$$x = 3$$

13 is a positive number.

c) Solve:

Initial population = 1,75,000

Final population = 2,62,500

Increase in population = 2,62,500 - 1,75,000
= 87,500

% increase = $\frac{\text{Increase in Population}}{\text{Initial Population}}$

$$= \frac{87,500}{1,75,000} \times 100$$

$$= 50\%$$

Average in decade = $\frac{50\%}{10} = 5\%$

d) solve

$$\text{dozens of eggs} = 375 \times 20$$

$$= 7500$$

$$\text{Price of 1 egg} = 375$$

$$= 31.25$$

With 33 rupees per egg price of 20 dozens egg

$$\begin{array}{r} 262500 \\ - 175000 \\ \hline 87500 \end{array}$$

$$\begin{array}{r} 875 \\ \times 100 \\ \hline 87500 \end{array}$$

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$$= 33 \times 12 = 396$$

$$\text{Price of 20 dozens} = 396 \times 20$$

$$= 7920 \text{ rupees}$$

$$\text{Profit \%} = \frac{\text{Selling Price} - \text{Cost Price}}{\text{Cost Price}} \times 100$$

$$= \frac{7920 - 7500}{7500} \times 100$$

$$= \frac{420}{7500} \times 100$$

$$\text{Profit} = \frac{420}{7500} \times 100 = 5.6\%$$

$$\begin{array}{r} 396 \\ \times 20 \\ \hline 7920 \end{array}$$