

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.

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.

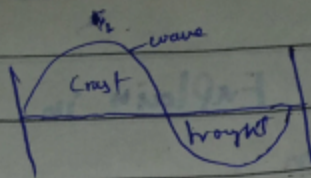
3. You need to understand that your paper is supposed to look more scientific than theoretical. So, add flowcharts and diagrams where required.

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.

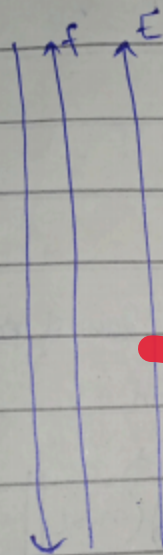
6. In ability portion, give explanation for analytical ability question in words. You need to understand that a 5 mark part requires all steps written and explained.

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



$E = hc \nu$ is the electromagnetic
EMR

1. Gamma Rays
2. X-rays
3. Ultraviolet
4. Visible
5. Infrared
6. Microwave
7. Radiowave



Gamma Ray
X-rays
Ultraviolet
Visible

Infrared
Microwave
Radiowave

1) Gamma ray

Gamma rays are used in building find the edge and crack

2) X-rays

X-rays are used in for bone (X-ray) fracture

3) Ultraviolet

It is used in convert the ultraviolet into the visible

Visible

is the rain bow.

Infrared

It transforms single in

TV. It is used in remote

Microwave

It is used in TV, Mobile etc

Radiowave

Radiowave in satellite

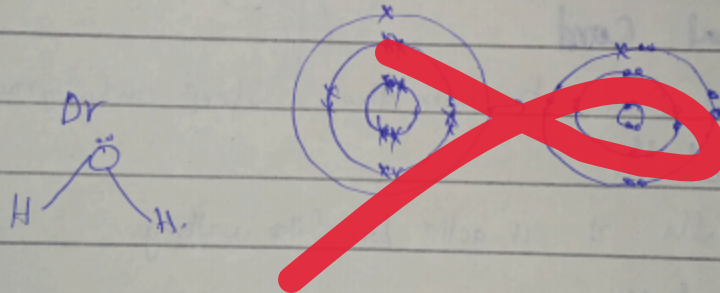
(d) Are earth Quakes and volcanic eruption interconnected if yes then how.

Yes because both are the Trembling and Shaking of ground due to earth. both effect human lives. and destroy the Agriculture road.

Q: No: 2

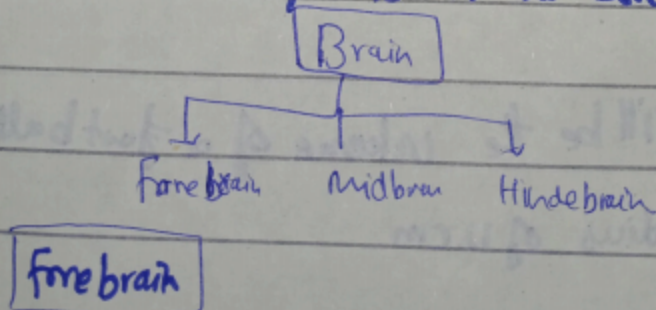
(d) What are covalent bonds? Explain types along with elaborating structure.

Covalent bond are the sharing of electron both



Q: No: 5

Given structure and function of human brain Why is it the control center



Forebrain contain Cerebrum, Thalamus and Hypothalamus.

Cerebrum	The Corpus Cerebral are connected to right and left side of Hemisphere.
Thalamus	it occurs between Cerebral and Midbrain.
Hypothalamus	it control the Pituitary gland.

Midbrain

Midbrain are between the Fore and hindbrain
it control the Spinal and Cerebrum.

Hindbrain

Medulla Spinal, Cerebellum

Spinal Cord

Spinal cord balance the Sleep and daily routine.

Medulla

Medulla it is active base like walking.

Cerebellum

Cerebellum control the Sleep.

Section II

Q: No: 6

(c)

What will be the volume of a football with a radius of 12 cm

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

$$= \frac{4}{3} \times 3.14 \times 12^3 = 75.36$$

(d)

Given a Series -6, -8, 6, 40, 102?

-10, -8, 6, 40, 102?

-2 2 36 62 40

Answer 40

(b) A mixture contains sugar solution and colored water in the ratio of 4:3 If 10 liters

of colored water is added to the mixture, the ratio becomes 4:5

For mixture give mixture

$$4:3 = 4:5 = 10$$

$$4/3 = 4/5 = 10$$

$$\frac{4x}{3} = \frac{4}{5}x = 10$$

$$\frac{4x}{3} - \frac{4}{5}x = 10 \quad = \quad \frac{4x}{5} = 10 \quad \Rightarrow \quad x = 12.5$$

OR

$$4x + 3 - 10 = 4x + 5 - 10$$

$$4x + 4x = 5 - 3 = 2 \Rightarrow 8x = 2$$

$$8x = 2$$

$$x = \frac{2}{8} = \frac{1}{4}$$

$$\boxed{x = \frac{1}{4}}$$

(a) Determine the "K" value if the arithmetic mean of 9, 8, 10, K, 12, is 15

$$\frac{9 + 8 + 10 + K + 12 + 15}{6} = 15$$

Q: No 8

(c)

Verify the A union B complement formula $(A \cup B)' = A' \cap B'$ for the sets

$$A = \{10, 11, 12, 13, 15\} \quad B = \{10, 12, 14\} \quad \text{and} \\ U = \{10, 11, 12, 13, 14, 15, 16, 18\}$$

$$(A \cup B)' = A' \cap B'$$

$$A = \{10, 11, 12, 13, 15\} \quad B = \{10, 12, 14\}$$

$$U = \{10, 11, 12, 13, 14, 15, 16, 18\}$$

$$A \cup B = \{10, 11, 12, 13, 15\} \cup \{10, 12, 14\}$$

$$= \{10, 11, 12, 13, 14, 15\}$$

$$U - (A \cup B) = \{10, 11, 12, 13, 14, 15, 16, 18\} - \{10, 11, 12, 13, 14, 15\}$$

$$= \{16, 18\} \quad U - (A \cup B) = \{16, 18\} \quad \text{--- (1)}$$

$$A' \cap B' = (U - A) \cap (U - B)$$

$$U - A = \{10, 11, 12, 13, 14, 15, 16, 18\} - \{10, 11, 12, 13, 15\}$$

$$A' = \{14, 16, 18\}$$

$$U - B = \{10, 11, 12, 13, 15, 16, 18\} - \{10, 12, 14\}$$

$$B' = \{11, 13, 15, 16, 18\}$$

$$A' \cap B' = \{16, 18\} \cap \{11, 13, 15, 16, 18\}$$

$$A' \cap B' = \{16, 18\} \quad \text{--- (2)}$$

Hence Proved both side are equal

$$(A \cup B)' = A' \cap B'$$