

Dos and Don'ts for General Science & Ability Paper

Day: Wednesday

Date: 05/06/24

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 2 sides (not more than that) 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.

Give appropriate and detailed answers that ought to be

analytical and give explanation for every 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. :)

3) Focus on reduction in ~~cars~~ emission of green-house gases

The capacity/limitations on ~~Carbon-Hydro-Carbon~~ emissions should be monitored for the countries to actually act on it. A goal should be setup to introduce more environmentally friendly way to generate energy. One such example is switch to electric cars. ~~USA~~ has reduced emissions. Hence, a goal can be set to ~~introduce~~ emphasise electric and hybrid cars to be introduced ~~in~~ to the market.

Explain properly

4.) Renewable Sources

More focus should be directed to utilising Renewable energy sources, of hydel, wind and solar power that ~~will~~ has minimal affect on ~~our~~ atmosphere with no emission of greenhouse gases.

Give proper distinction here that a new part is being started

The common function of arteries, veins and capillaries is that blood passes through it. Arteries carry oxygenated blood from the heart throughout the body where as deoxygenated blood from heart to lungs. They are thicker than veins to withstand blood pressure from heart.

Veins carry deoxygenated blood from the body into the heart and oxygenated

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Add diagrams

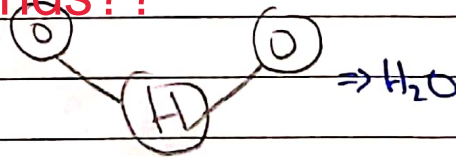
blood flow lungs into the heart.

Capillaries are tiny pathways that carry blood to all the cells of the body. They are arteries that were divided into tiny, so effective and efficient access to blood to the vital cells. Blood contain oxygen in red blood cells, white blood cells and plasma which are essential for the cell to function.

- c) Atoms form chemical bond by two ways
- 1) transferring its electrons to other atoms
 - 2) Sharing a common electron with them.

This results in chemical reaction in which energy is released. As a result, a compound is formed from an element.

Why do they form chemical bonds??



The chemical name of water is H_2O . It contains two oxygens and one hydrogen that are chemically bonded forming a compound.

Conductor:

d)

Conductor ~~can~~ have the ability to let ^{electron} heat flow through it. Hence, it can easily attain and lose heat.

For example, Copper

Semi-Conductor:

Semi-Conductor partially allow heat to flow through it. They take time to gain and lose heat.

For example, Plastic

Q3.

a)

Technological advancement has decreased the quality of food especially in terms of the ~~nutrient~~ nutrients composition. This can lead to malnutrition which will result in various diseases among human beings.

Firstly, genetic engineering in seeds of agricultural product may have reduced reliance on pesticides and insecticides. It may also have increased the overall production. However, it has resulted in food low on nutrients. This is why organic food has been given a separate category which are more expensive to buy.

Secondly, poultry farms give hormonal feed to the chickens which result in a quick increase in size of chicken to meet the rising demand of the world. However, it has shown health concern in humans due to less nutrients or more contaminants than organic chicken.

Lastly, the excessive use of pesticides and insecticides on agricultural produce can be consumed by humans resulting in health issues.

Generic!

Add proper explanation and headings

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b) Solid waste can be divided into two broad categories: biodegradable and non-biodegradable.

Non biodegradable poses to the most serious threat in terms of plastic. World is heavily dependent on plastic because of its durability and cheap. It can be hard and soft both. Hence its use is prevalent. Unfortunately, its cannot be decomposed resulting in rise in plastic level in land and sea. Hence, it is a serious challenge to waste management.

However, biodegradable substances also need a proper place of dumping. Rising population and lack of technological and human resources in various part of technical the world has made it a challenge. Moreover, the cost involved in the process should be ignored.

Generic!

Moreover, there is a lack of awareness on the part of public on ways to dispose waste. In countries like Pakistan, people conveniently dispose trash in sewage, rivers and land. This further increases the cost. Hence the management has to take extra efforts in waste disposal from these areas other than those assigned for the management.

In addition, the lack of recycling waste and its competency by both the administration and public further add to the issue.

c) Dengue Fever is the result of mosquitoes that ~~breases~~ act as carriers to Dengue virus. ~~vesel~~ These mosquito bites on the human skin thereby releasing these viruses.

The symptoms of dengue virus include an increase in body temperature, shivering, pain behind the eyes, joints and muscles, fatigue and severe headache. The person feels restless and has bleeding in gums. There is ~~severe~~ pain in ~~Abdominal Region~~ ~~Fortunate~~ it can be treated.

Add diagrams
Give proper headings

d) Tsunami has been derived from Japanese term Tsu which means "harbor" and Nami which means "waves". Tsunami can result from the movement of tectonic plates resulting in transmission of energy from the plates into the ocean. This results in displacement of water and formation of wavelengths that could carry debris with them in the process. Moreover, they can reach to a ~~height~~ ~~of~~ 100 ft and a speed of 800 km/h. Hence, when they hit the land, they have to be very destructive with huge loss of land and infrastructure.

Richter Scale calculates the magnitude

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of an ~~earth~~ earthquake on surface
whereas Volcanic Explosivity Index
measures the intensity of a volcanic
eruption.

Section II

Q7.

a)

Intelligence Quotient (I.Q.) defines the ability of a person's intelligence. IQ is affected by food nutrient, inheritance, upbringing, etc.

b)

$$\text{Circumference} = 2\pi r$$

$$= 2\pi \times 22 \times 4$$

$$= 25.14 \text{ cm}$$

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9) Mean = $\frac{\text{Sum of all the numbers}}{\text{Total numbers}}$

= $\frac{107}{5}$ Mean = 21.4 yrs

Mode \rightarrow Most Frequent = 21 years

Median \rightarrow middle

20, 21, (21), 22, 23

Median = 21 years

Range = $(23 - 20) + 1$
 = $3 + 1$
 = 4

1) Tahir $t=0 \Rightarrow 15000 \text{ Rs/-}$
 Umar $t=5 \Rightarrow 30000 \text{ Rs/-}$
 Usman $t=9 \Rightarrow 45000 \text{ Rs/-}$

Profit = 406000

Usman's Profit = $\frac{45000}{90000} \times 406000 \times \frac{31}{124}$

$\frac{2}{1} = 50750 \text{ Rs/}$

~~Umar's Profit = $\frac{30000}{90000} \times 406000 \times \frac{7}{12}$~~

R.w
 $\sqrt{107}$
 $\sqrt{107}$
 $\sqrt{107}$
 20
 21
 1127
 $\sqrt{10150}$
 94
 91
 235
 78
 56750
 $\sqrt{20300}$
 201
 230
 28
 200
 200
 $\sqrt{406000}$
 41
 6
 5075
 $\sqrt{406000}$
 4060
 60
 54
 60
 54
 60

$$= 78943.9 R$$

Tahir's Profit = 106000 - (50750 + 78944)

$$= 276306.2$$

50750
 78944

 129694
 50750
 129694

 276306

Q2.

- a)
- | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I |
| J | K | L | M | N | O | P | Q | R |
| S | T | U | V | W | X | Y | Z | |

BROTHER
 QDGSNQA

The relation pattern of BRO~~T~~ER with QDGSNQA starts in opposite direction with one letter backward. Therefore ~~S~~ISTER will be coded as follow.

Explain properly

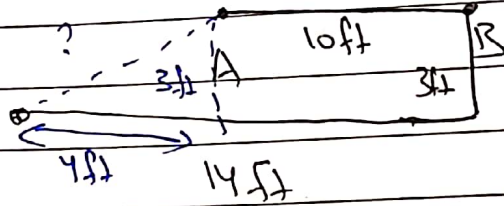
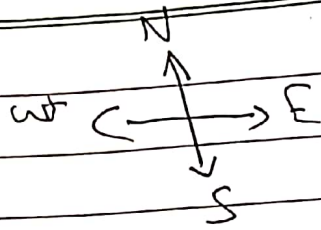
SISTER
 QDSRHR

- b) 1, 2, 6, 21,

1:2, 1:3 2:7

1x2 = 2
 1x2 + 2 = 4
 2x2 + 2 = 6
 3x3 + 6 = 15

c)



Using Pythagoras Theorem,

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

$$x = \sqrt{(4)^2 + (3)^2}$$

$$= \sqrt{16 + 9}$$

$$= \sqrt{25}$$

$$x = 5$$

Naseem is 5 feet away from A.

We assume that

d) $\text{Avg (7 days)} = \frac{M + T + W + Th + F + Sat + Sun}{7}$

$$\frac{233}{1} = 231$$

~~We assume Thursday to be fourth day~~

~~$$\text{Avg (7)} \cdot 33 = \frac{\text{Sum (7)}}{7} \Rightarrow 231 \Rightarrow (x)$$~~

Let first 3 sum be y

$$\text{Avg (first 3)} \Rightarrow 35 = \frac{y}{3} \Rightarrow 90$$

$$\frac{1}{35} = 90$$

Let last 3 sum be z

$$\text{Avg (last 3)} \Rightarrow 35 = \frac{z}{3} \Rightarrow 105$$

Thursday $\Rightarrow \text{Thur} = 231 - \frac{1}{3}(90 + 105) \Rightarrow 36^\circ C$

$$\frac{1}{195} = 231$$