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

Q.2

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.

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. :)



conducted annually to discuss Environmental assessments and mitigation. certain measures should be taken to deal with intense heat which is degrading the environment.

### Decrease the level of GHGs:

Green house gases e.g.  $\text{CO}_2$ , methane, CFCs are major cause of global warming. targets should be set by countries to decrease their level as in Kyoto Protocol. European countries set target of 5% decrease in  $\text{CO}_2$  as compared to 1992 level in 2008. later they successfully achieved the target and even encompass this level by achieving 20% reduction.

### Carbon taxation:-

This is newly introduced concept of developed countries. In which states imposed tax on industries for emitting  $\text{CO}_2$  than desired level. It is highly effective as industries are major contributors to global warming.

### Promoting renewable energy

There is long debate in transitioning of non-renewable to renewable energy but less has been achieved. So,



it is essential for developing as well developed countries to commence the strategies to promote renewable sources of energy. According to report of EPA currently 15% of electricity is produced by renewable sources.

## Establish Sponge cities:

This concept is introduced by China and gradually adopting by several countries. China has built sponge city which is whole green city. Although it is costly but it is effective in reducing the global warming.

## Aforestation and Reforestation:

Forests are important reserves of  $\text{CO}_2$ . They are called as carbon sinks as they store high quantity of  $\text{CO}_2$ . So, general of COP29 should be to encourage new means of plantation and reforestation which have been cut down after they have



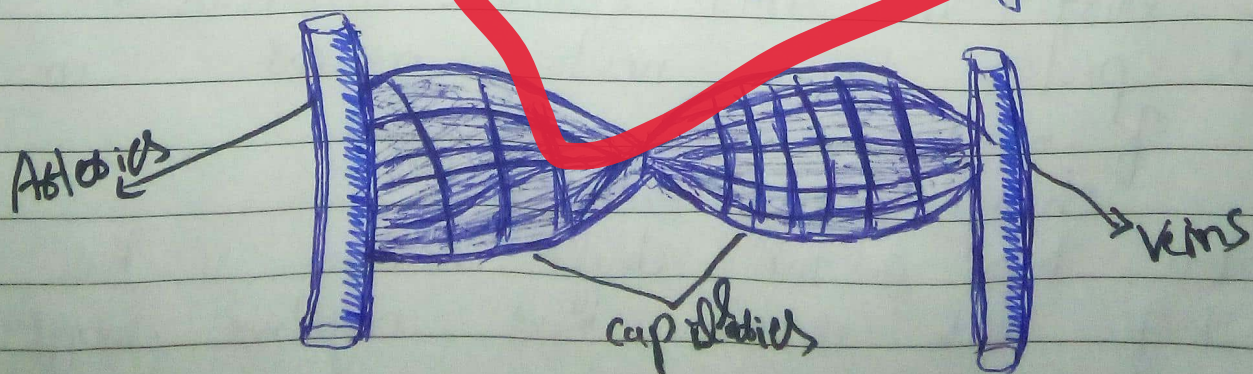
## b- Functions of Arteries, veins, capillaries?

### Arteries:

These are the blood vessels which carry blood from heart to all body parts. They carry oxygenated blood. They have high blood pressure. Aorta is major artery which carries blood.

### Veins:

Veins carry blood from body organs back to the heart. They carry deoxygenated blood. Blood then enters into lungs where oxygen enters into blood. Veins have low blood pressure level. Superior vena cava carry blood to upper parts of body while inferior vena cava carry blood to lower parts of body.





## Capillaries:

These are the blood vessels present between veins and Arteries. They are in close connection with body organs. oxygenated blood from vein enters into capillaries which surround body organs. from here blood enters into body organs and vice versa. These exist in form of bundles. They generally have low pressure level.

C- why do atoms form chemical bond? structure of water?

### Chemical bond in Atoms:

Atom is small part of matter. Atoms consist of nucleus in its centre and certain charged particles. Electrons are negatively charged while proton and neutron present in centre of nucleus.

charge on particles:  
Proton has positive charge, neutron has no charge, while electron have negative charge.

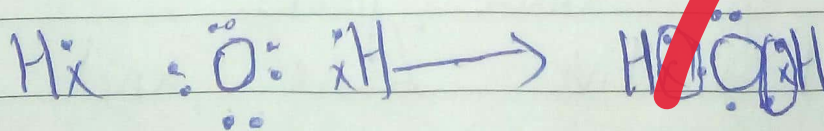


Atoms mainly form chemical bonds due to Electrostatic forces of Attraction in which particles having opposite charge attract each other and form bond. As proton has +ve charge and electron has -ve charge. So when these particles come in close connection due to free electrons, they attract each other.

Mainly bonding include:  
Ionic bond      covalent bond  
Co-ordinate    coordinate bond.

## Structure of water:

The formula for water is  $H_2O$ . Here Hydrogen has one electron while oxygen has 8 electrons. Its chemical bonding include covalent bond between two H atoms and one oxygen atom.





Q. 4

b-

Explain Structure of SUN

Ans

Structure:-

Sun is part of Milk way galaxy. It is one of the stars of this galaxy. Sun mainly consist of Hydrogen and Helium gases. which form hottest and dense structure of Sun.

Certain nuclear fusion reaction takes place in Sun which released energy in the form of light. a part of this energy enters the atmosphere and reach the Earth.

Parts of Sun:

It consist of three parts, Core, Radiative Zone and convective Zone.

Core:

Its central part of Sun. In this part nuclear reaction takes place and release energy in the form of Heat



It is most hottest part of Sun. its temperature is  $15000^{\circ}\text{C}$ .

### Radiative Zone:

This is the outer part of Sun. Energy is released based on structure of this part. Energy released in form of light and carried by Photon as radioactive radiations.

### Convective Zone:

It is the outer most part of Sun. Again, energy released based on structure of this part. Here energy is released in form of convective radiations. This energy entered in surface of Earth. Some energy is reflected back.

Add diagrams



## d. Explain Structure of Ear:

### Structure of Ear:

Human Ear consist of three parts  
outer Ear, Middle Ear.

#### Inner Ear

Ear is auditory organ. it receive stimulus in form of sound.

#### Parts of Ear: outer Ear:

It consist of three parts including Pinna, Auditory canal and Ear drum.

**Pinna** It receive sound in form of waves and pass it to auditory canal. from here sound waves enter into Ear drum. It vibrate and produce sound.

#### Middle Ear

It consist of three small bones - Malleus, Incus and Stapes. Sound wave pass through all of these bones and enter into Inner ear.

#### Inner Ear:

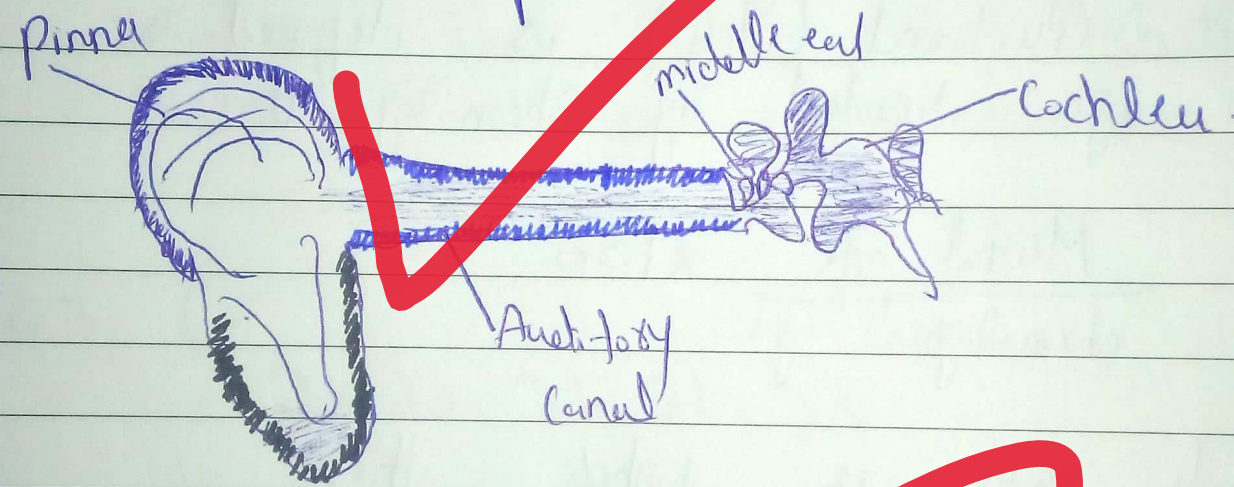
Inner Ear include Cochlea which consist of Ear receptors in form of Sillia. auditory nerves are present in this part



they take auditory sensation and transfer them into Brain.

## Temporal cortex:

Auditory nerves send the electric impulse to the Temporal part of cortex. Here sound is processed and understanding of sound develop.





## Section: II

Q-7

a- Define I.Q.---

I.Q

Intelligence Quotient (I.Q) is defined as mental age divided by chronological age

$$I.Q = \frac{\text{Mental age}}{\text{chronological age}} \times 100$$

If mental age is higher than chronological age then I.Q will also be higher.

Factors:

I.Q is affected by various factors including.

**Hereditary factors:** play role in I.Q. Studies shows in that parent having high I.Q their off springs also show high I.Q level.

**Environment factors:**

They have significant role



in affecting the I.Q level. among these factors Diet has foremost role. Diet having essential nutrients to enhance I.Q level. on the other hand nutrient deficiency can impair the Intelligence level.

other factors including: Educational environment, availability of resources that match the skills and parenting plays crucial role in I.Q.

Q.7 C

20, 22, 21, 21, 23

Mean

According to formula

$$\bar{x} = \frac{\sum x}{n}$$

$$\bar{x} = \frac{107}{5} = \bar{x} = 21.4$$

Median

According to formula

$$\text{Median} = \frac{n+1}{2} = \frac{5+1}{2} = \frac{6}{2} = 3$$

3rd value is the median which is 21



# Mode:-

It is the most repeated value in data set. Here 21 is most repeated. So 21 is the mode.