

Nimra Saif
OB 59

Q.2

a.

What is the threat of global warming, which is a global threat?

Global warming:

Global warming is defined as persistent increase in temperature on the surface of Earth. According to report of NOAA; Temperature of Earth has been increased by 1.5°C in 20 years. One of the major cause of global warming is high level of green house gases including CO_2 and Methane. which are released by human activities. It has adverse effect on living and non-living part of environment.

What measures should be taken to counter it in Cop-29?
Cop-29 is environmental organization

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. 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 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 not emitting CO_2 than desired level. It is highly effective as industries are major contributors to global warming.

Promoting renewable energy

There is prolonged 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 CO_2 . They are called as carbon sink as they store high quantity CO_2 . So, general of COP29 should be to encourage new means of plantation and reforestation which have been cut down after they have

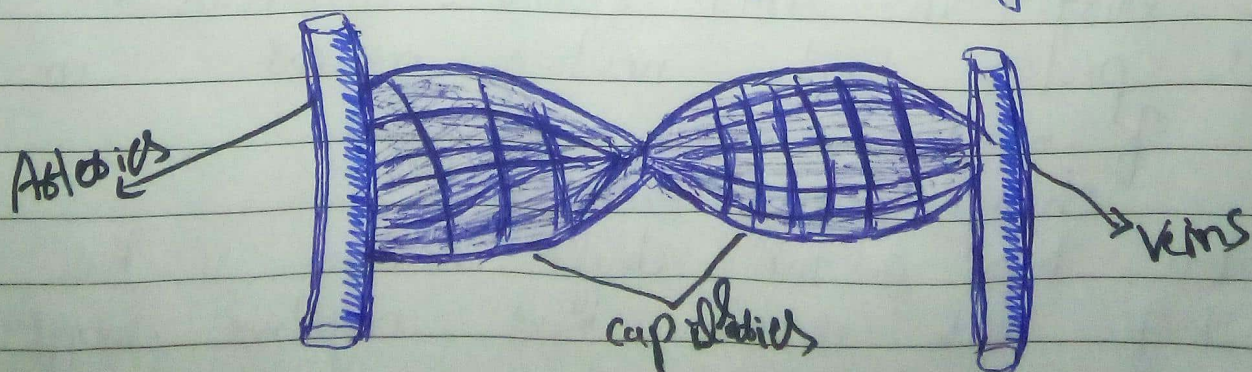
b- Functions of Arteries, veins, capillaries?

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 carries blood to upper parts of body while inferior vena cava carries 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 blood 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 exist in orbit around nucleus while proton and neutron present in centre of nucleus.

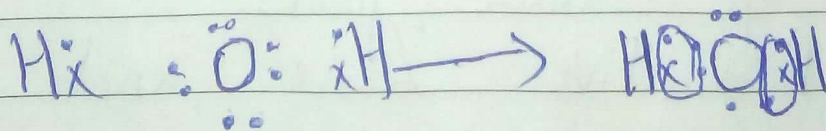
charge on particles:
Proton has positive charge, neutron has no charge, while electron have negative charge.

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 covalent 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°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.

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.

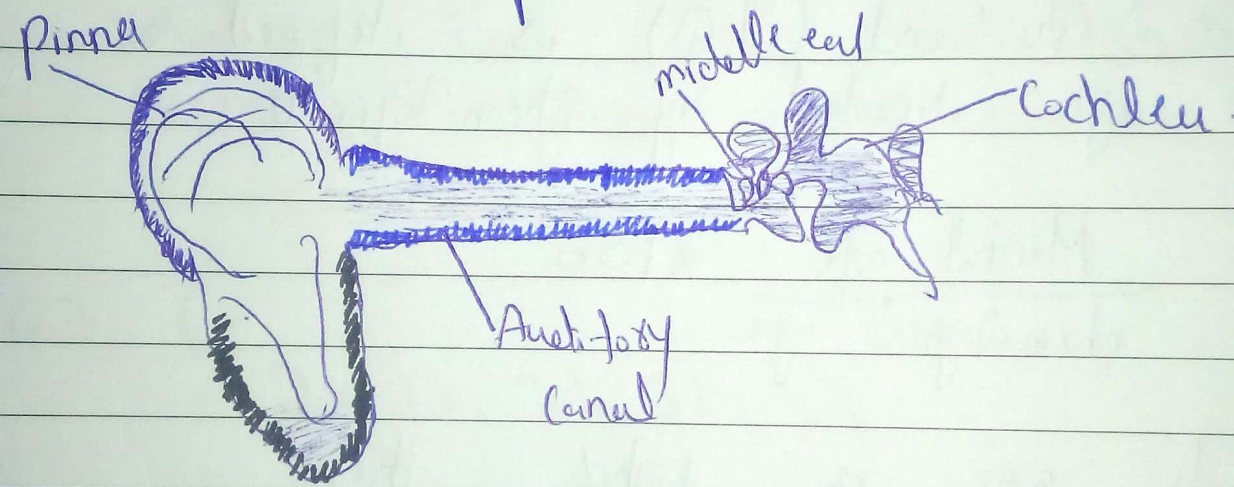
Inner Ear:

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 offsprings 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

$$\text{Median} = \frac{n+1}{2} = \frac{6+1}{2} = \frac{7}{2} = 3.5$$

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.