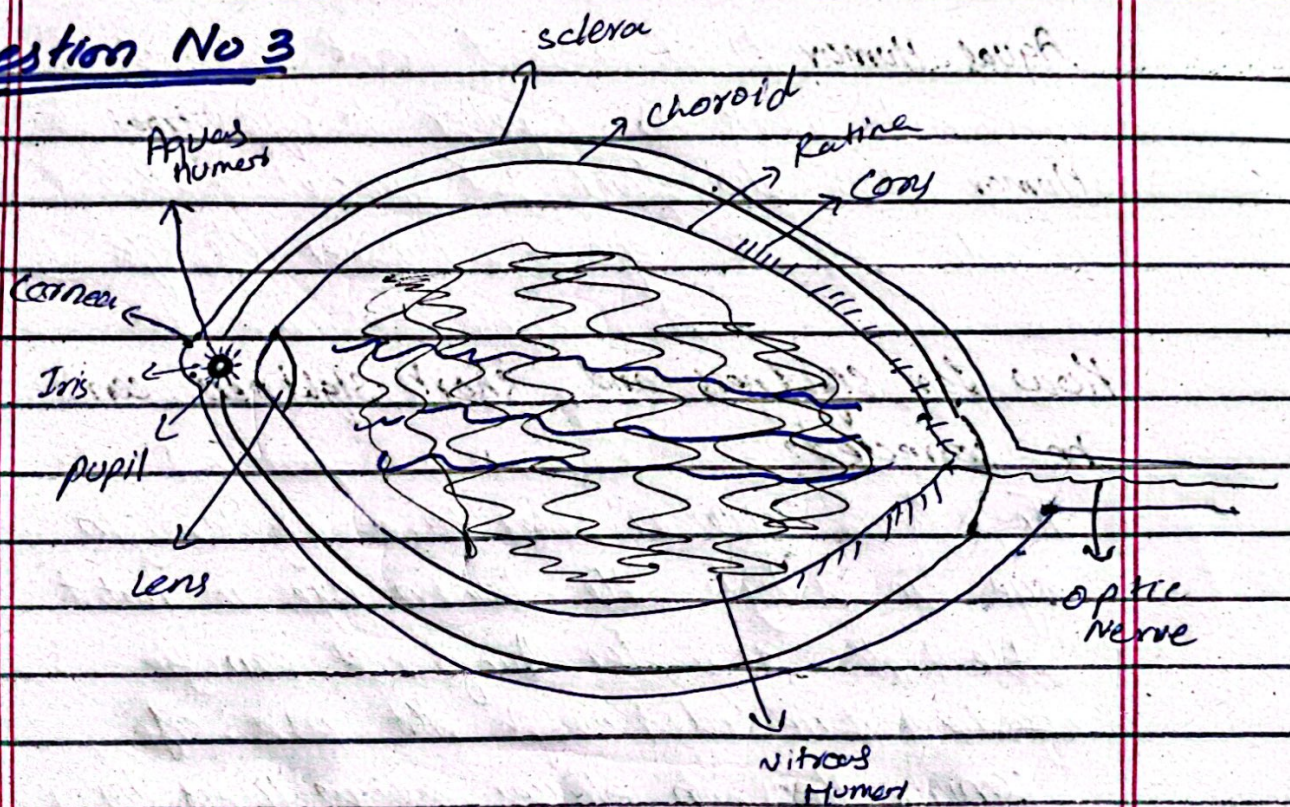


### Question No 3



#### a- Explanation

Human Eye is a sensitive organ and by which humans are able to see different sceneries. Cornea is the outermost part of the eye and protect eye it is the part by which light directly interact. Iris is the muscle of eye which can controlled the movement of pupil. Pupil is the small hole by which light enters into the eye and reaches to lens. Lens is receptor of eye and light lens projecting the image of eye. Retina is known as the photo receptor it contains cones and rods. Retina is inner layer and sensitive. Optic Nerve send messages to the brain about the image and brain work according to the situation. Sclera is the outermost layer of the eye and protects the eye choroid it is present beneath sclera and redish part of eye it contain capillaries

Aqueous Humour fluid present front side of the eye and work as supplier to eye vitreous. Humour it is also fluid but present back side of the eye it nourishes the eye.

How far sightness and short sightness can be corrected?

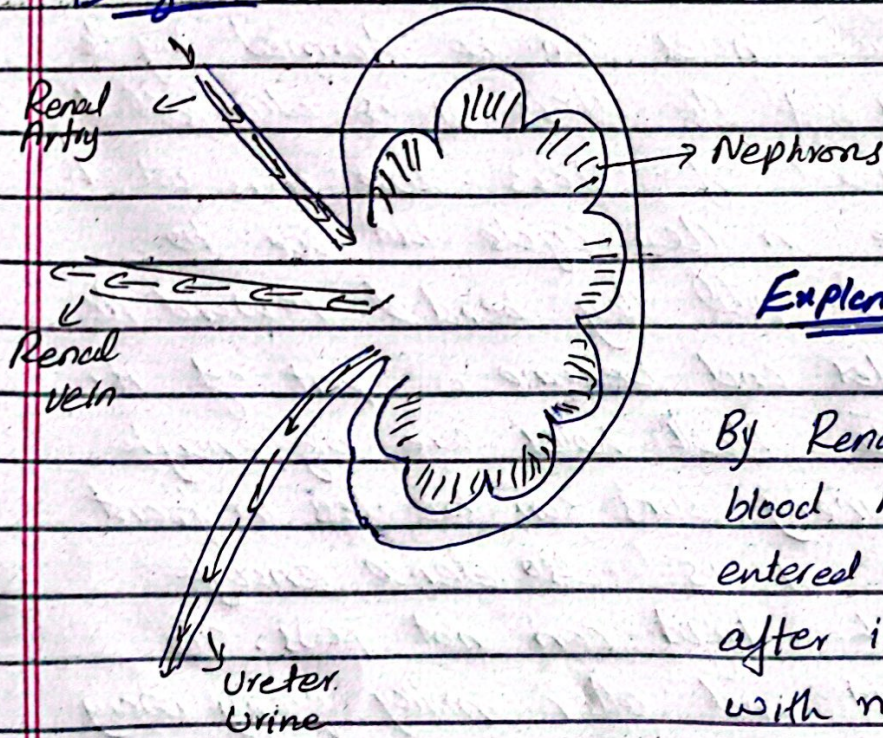
The far sightness can be a problem in eye in which the human eye is not able to see far things. It can be ~~reduce~~ corrected through the use of convex lens or glasses as well as by laser treatment.

The short sightness is also a problem in which human eye is not able to see close things. It can be corrected through the use of concave lens or by laser treatment.

\* How does a kidney work explain with diagram.

Kidney is an internal body organ in pair form. It can be work for the purification of blood as well as separation of urine. The basic function of kidney is to separate urine and also send it to urinary bladder. Another function of kidney is filtration of blood so it is so busy organ which performs two task at a time.

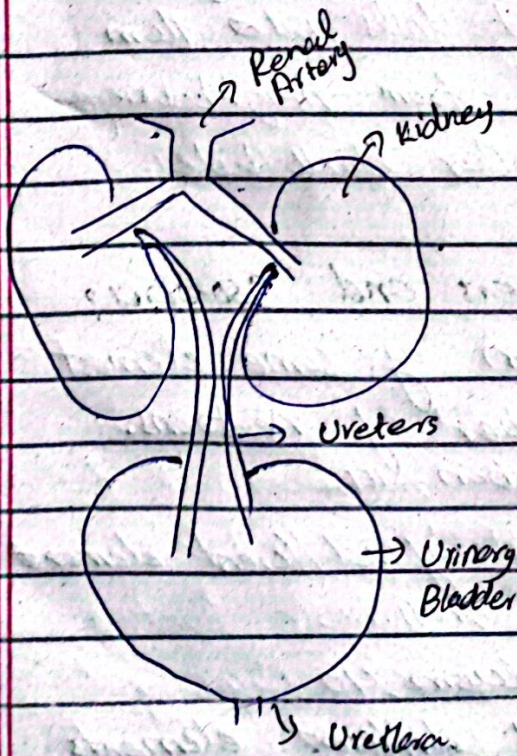
## Diagram



## Explanation:

By Renal Artery the blood has been entered into kidney after interacting with nephrons

The filter blood is move towards body and the seperated Urine is go to Ureter.



## Explanation

After the filtration of blood the kidney send filtered urine to the Urinary Bladder. Basically Urinary bladder is the warehouse in which urine is present for a short time and through Ureters it can be extracted from human body.

### c- How black holes are formed?

The black holes can be formed by the destruction of the stars it is also called the graveyard of stars. Those stars which can rotate in their cycle but due to gravitational pull they bended toward the black holes and become a part of it.

The black holes are big enough the so many suns can be less in front of them it is also dense enough by which light can not pass. The sun light and other milky galaxy way has not entered even into the black holes.

Once born, black holes can grow by accreting matter that falls into them, including gas stripped from neighbouring stars and even other black holes.

### d- What are Isotopes, Isobars and Isotones?

\* Isotopes are the atom of some element with different number of neutrons.

e.g: Carbon-12, carbon-14

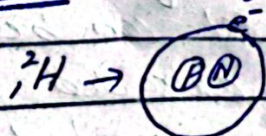
\* Isobars are the atom of different element with same atomic mass.

e.g: argon-40, calcium-40

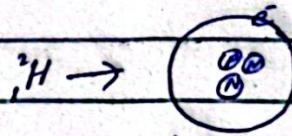
\* Isotones are atom of different elements with same number of neutrons

boron-12, carbon-14

### Example Hydrogen Isotopes



(one neutron)



(one neutron)

## Q No. 2

Discuss key features of COP-28 held in UAE in Nov. Dec 2023 ---- other financial issues of developing countries?

Conference of parties is annual based session in which most of the states were invited and also institutes and representatives of welfare organisations are also invited.

The main focus of COP28 is to manage environmental degradation and climate change. The global warming and climate change is not a problem of single country but it needs to address globally. Majority of developing countries are also invited in COP28.

### Focuses of COP-28

**Stop use of fossil fuels:** The main purpose of COP28 is to stop the use of fossil fuels and now countries want to shift their economies to Bio-fuels.

In the use of bio fuels comparatively less damaged to the environment.

Developed countries used high industries in which fossil fuels can be used and these fossil fuels cause the air pollution, water pollution and land pollution.

**Stop over exploitation of resources:** The another main point of COP-28 is to stop over use of natural resources now, world has consumes more

Faster than the capability of production of earth. of these resources are and then difficulties for living organism. The human beings are exploit 1.75 earth resources in 21st century.

**Control global warming:** The global warming is another big problem of current world and through global warming every individual has suffered. Glaciers are melt so fastly and level of sea also rises. The 78% of fresh water or drinking water come from glaciers. If temperature will increase to  $2.5^{\circ}\text{C}$  then the glaciers will melt within next 70 years so it is also big problem which can be discussed for eg. in COP28.

**Vulnerable countries:** The countries which are suffered more by environmental crisis are called vulnerable countries and mostly these countries are developing countries in which economy is so low. The main agenda of COP-28 is that how to save developing countries from these dynamics.

**allocating funds:** Every country officials and researchers gave their presentations during COP-28 and representing their country. Now, the COP-28 main agenda is to spare some fund for the developing countries which are

suffered from the global warming and climate change.

b- What is solid waste management discuss different methods?

The solid waste management is a process in which the management of waste can be take place in a good way.

The main problem of nowadays is pollution because everything is contain plastic bags and those things which are un-renewable. These things can work in pollution which are harmful for living organism.

### Methods

\* Open dumping: It is an old process in which waste can be carried out far from the population and cities where it can be dumped, but this process has not so effective and un-sustainable management of waste. It is highly discouraged because it has so many effects like land and air pollution.

\* Composting: It is controlled and biological decomposition of waste material in which micro organism can be used just like Bacteria. It is an effective process in which controlled environment is needed. Through composting the solid can be change in a process.

\* Incineration: This is also process of

Solid waste material in which burning of solid waste through incinerators. Basically in this process controlled system is required and we can find more energy from this process for other uses. It is the process in which inorganic waste can be burned.

**Land filling:** The land filling is a process in which solid waste can be dig out into land it is not good process but as compared to open dumping it is good.

c- Write a note on Balance Diet?

Human body required food for its function we can say that without food body cannot survive, but the efficiency and deficiency of some elements are also harmful for human body. This can be solved through balance diet which can be maintain through dietist according to weight, height, age and gender. The balance diet contains.

a. Carbohydrates: are the main source of energy to body carbohydrates are used for the performance of brain.

b. Proteins: Proteins are important for the healing process. The proteins also strengthen the immunity of human body.

c. Lipids: fats are also essential for human body in fats body can use fats during shortage of food.

d. Vitamins: Vitamins are also essential



essential for human body. Vitamins are essential for working of a body and reproduction system.

**Minerals:** These can strengthen the bones just like teeth and hands, feet ~~are~~ vitamins are also used for skin glorification just like ~~is~~ potassium and sodium.

### Conclusion

The efficiency and deficiency of these elements are harmful for human body. Human body can not grow properly without these and where the shortage of food the childrens can face the malnutrition. So, for human body it is essential to contain balance diet.

d- Discuss any three renewable energy resources under CPEC?

The CPEC is the sub part of BRI and through which many projects can be performed. China-Pakistan economic corridor has so many projects in which few are renewable.

**Qasim Solar system:** This is one type of project in which solar energy can be used.

**Quaid-e-Azam Park:** In this park many renewable resources.

**wind energy:** At the coastal areas wind energy can be made through turbines.

b- Mean of 10, 30, y and 50 is 50

Sol

$$10, y, 50, 30$$

$$= \frac{y+50}{2} \Rightarrow \frac{y}{2} + \frac{50}{2} = 50$$

$$\frac{y}{2} + 25 = 50$$

$$\frac{y}{2} = 50 - 25$$

$$y = -25 \times 2$$

$$y = -50$$

c- find missing term

i) 2, 6, 18, 54, 162

ii) - 3125, 256, 32, 4, 1

d- Product of two numbers 320.

$$\text{Ratio} = 1:5$$

What is the difference between squares of these two numbers.

Let x and y are the number

$$x:y = 1:5$$

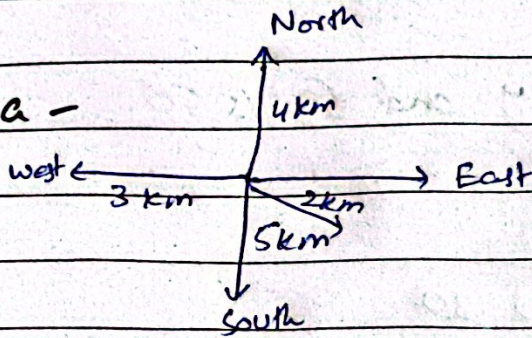
$$x = 1, y = 5$$

Taking product of square

$$x = (1)^2, y = (5)^2$$

Q No 8

a -



Total distance in vertical =  $T_{\text{North}} - T_{\text{South}}$

Total North - Total South + 1 East

$$5\text{ km} - 4\text{ km} = 1 + 1\text{ km}$$

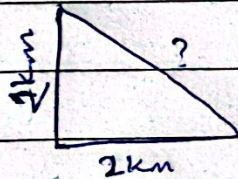
2 km

Total Horizontal Distance

Total West - Total East - south + 1 South

$$3\text{ km} - 2\text{ km} = 1 + 1\text{ km}$$

2 km

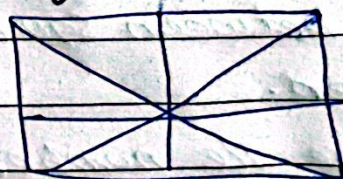


$$(\text{hyp})^2 = (\text{Base})^2 + (\text{Per})^2$$

$$\text{hyp} = \sqrt{\text{B}^2 + \text{Per}^2}$$

$$\text{hyp} = \sqrt{2^2} = \boxed{2\text{ km}}$$

c- No of triangles



= 8 No of triangles

d- Discuss the factor which can affect IQ,

The Depression and overthinking is a factor which can be affect IQ.