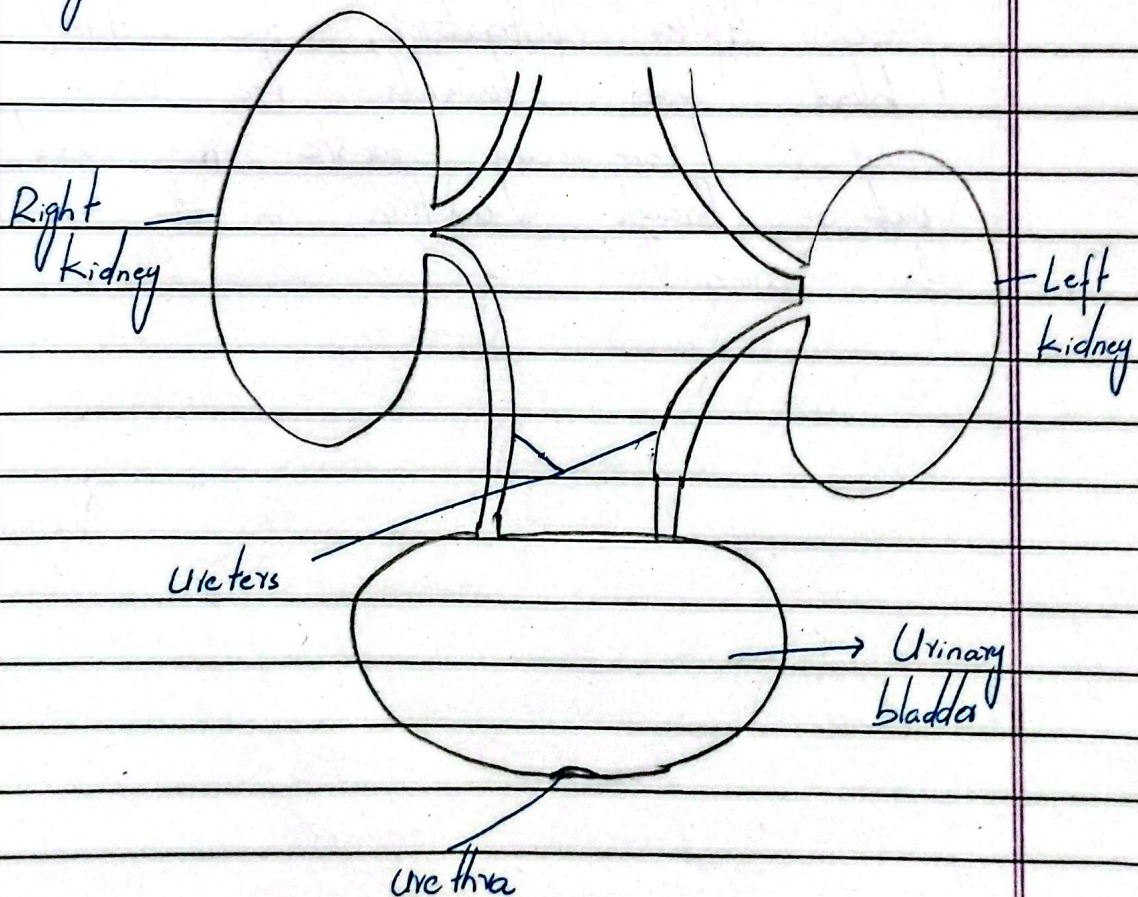


Section - A

B.

Answer

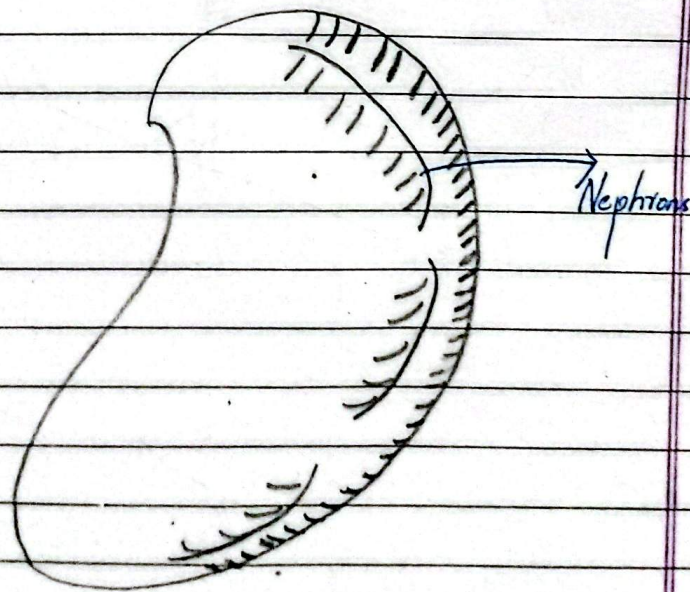
Urinary system responsible for the excretion of waste from the body through a small opening called urethra. Urinary system involves kidneys, ureters, urethra and urinary bladder to carry out the function of urinary system.



Structure of Urinary system

Working of nephron

Nephrons are functional unit of the urinary system. There are at least 2 million nephrons in the human kidney. The function of nephron is to filter out the blood and remove waste in the form of urine. Through renal artery, the unfiltered blood comes in the kidney, where in the glomerulus of nephron the actual filtration of blood takes place. After filtration, the filtered blood goes towards the body, and remaining waste is removed out through urethra in the form of urine.



C.

Answer

An un-balanced diet is defined as intake of inadequate food required for the body to function properly.

How unbalanced diet affects the healthy living.

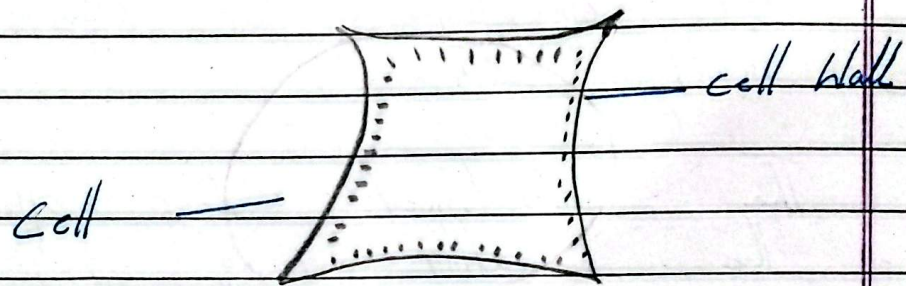
The unbalanced diet affects the healthy living significantly. Due to unbalanced diet, the healthy human is trapped in numerous life taking diseases. Initially, due to unbalanced, the brain does not function properly. Secondly, the living being is tired all the time. Thirdly, the bones of the living being are weak due to osteoporosis. Forthly, the living being is tend to become lazy all the time. Fifthly, the living suffers from numerous diseases, such as anemia. Finally, the living being becomes mal-nutritious. Hence, this is how unbalanced diet affects the healthy living.

D.

Answer

Cell Wall

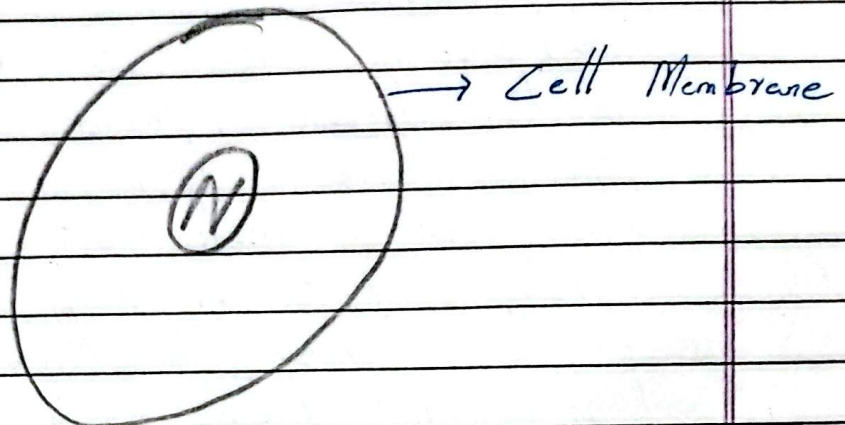
Cell wall is the outer most wall of the cell. It is responsible for giving shape and protection to the cell.



Cell Membrane

Cell membrane is the outer most wall of the animal cell, but in plants cell, it is inside the cell wall. It is known as semi-permeable membrane. It is best explained through the model of Fluid Mosaic, which explained the function of this membrane. The reason, why this membrane is called as semi-permeable because it allows certain minerals and nutrients to pass through it.

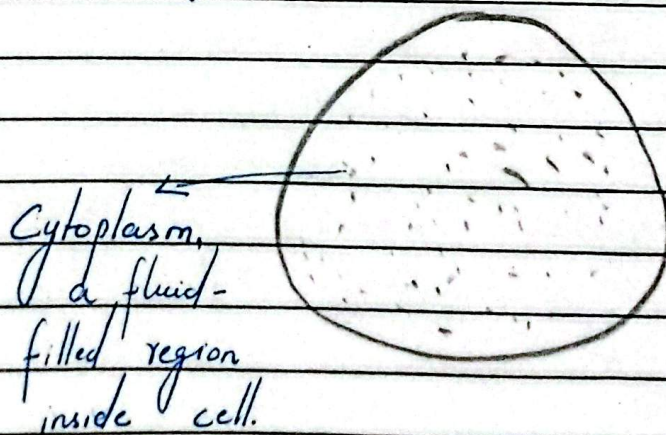
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Structure of cell membrane

Cytoplasm

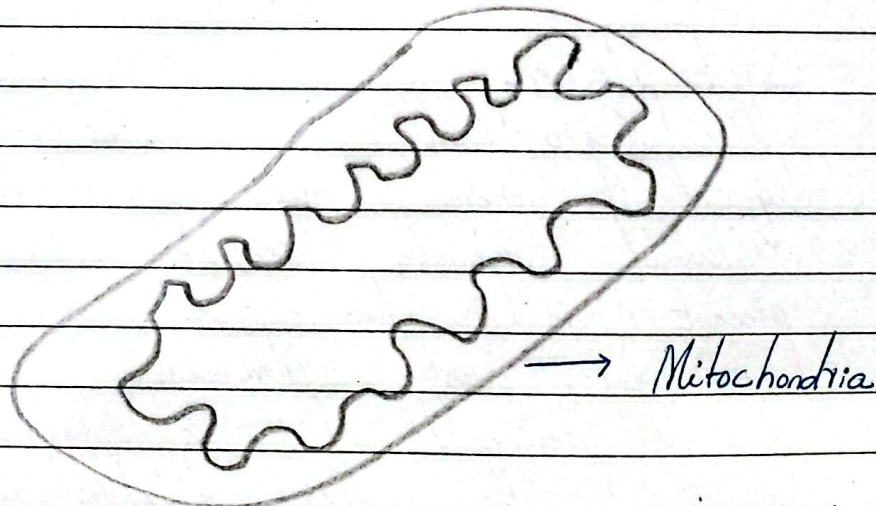
Cytoplasm is a fluid-filled liquid where the membrane bound organelle reside. It is present in the cell of eukaryotes only. Moreover, with the presence of cytoplasm inside cell, all organelles of the cell takes shape & position according to their function.



DATE: _ / _ / _

Mitochondria

Mitochondria is a ~~two~~ membrane-bound organelle present inside the cell. The primary function of the mitochondria is to produce ATP, an energy currency, to provide energy to the body. It is also known as power house of the cell.



Structure of the Mitochondria

DATE: ___/___/___

A.

Answer

According to the big bang theory, the universe was formed over 2 billion years ago. The structure of the universe is complex according to big bang theory. It has millions of galaxies. Moreover, there is presence of black hole where the gravitational pull is the highest. Furthermore, the galaxy in which the living being live is the milky way galaxies. The Milky Way galaxy has its own solar system, where there are eight planets and each planet has its own satellites known as moon. The planet in which living things can survive is the Earth where life can only exist. It is also known as the blue planet due to the presence of seventy percents of water.

Q: 04

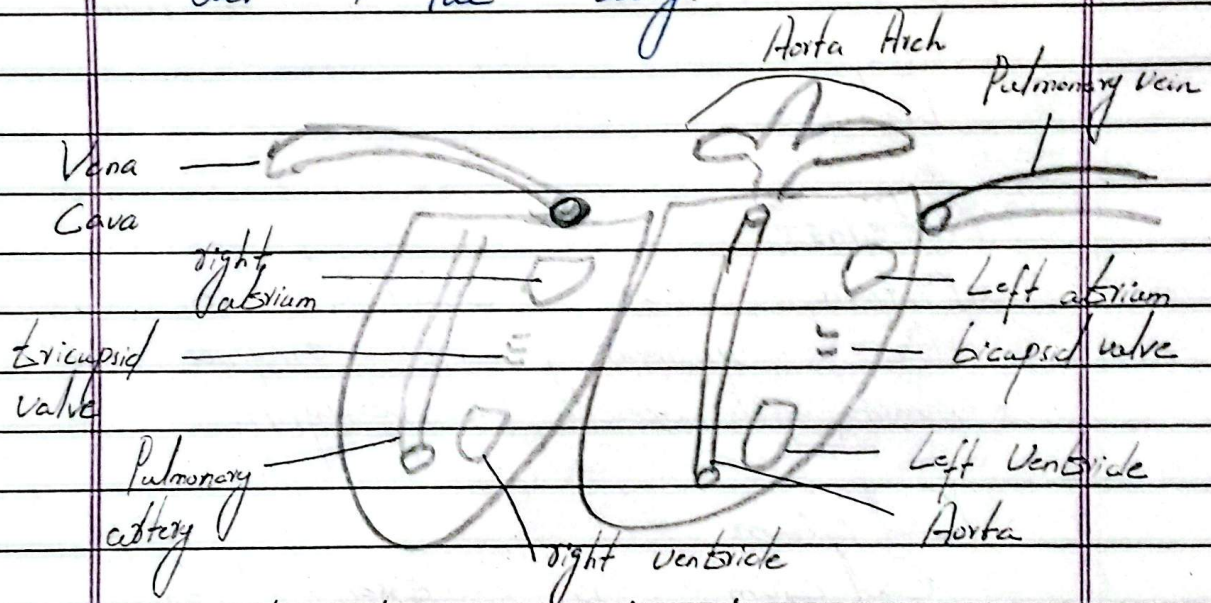
A.

Role of Heart and Blood Vessels in Circulation

Heart is known as the pumping organ of the body as it circulates the blood all over the body with the help of blood vessels. The largest vein Vena Cava takes the deoxygenated blood from the body to the heart. Then, with the contraction of Vena Cava, the blood is transferred to right atrium, and with the contraction of right atrium the blood is transferred to right ventricle, where the presence of tricuspid valve prevents the backflow of the blood. With the contraction of right ventricle, the pulmonary artery takes the blood towards lungs for oxygenation. Then the pulmonary vein takes oxygenated blood towards the heart, where the left atrium receives it. With the contraction of right atrium, the blood is transferred

DATE: ___/___/___

to left ventricle where the presence of bicuspid valve prevents the backflow of blood. With the contraction of the left ventricle, the blood is received by aorta, where aorta arch transfers the blood to all over the body.



Structure of the Heart
and blood vessels

C.

Answer

Carbohydrates

Carbohydrates are essential for the working of brain and mental well-being. 3.9 calorie is gained from the one gram of carbohydrates.

Proteins

Protein are essential for the synthesizing of enzymes, which are bio-catalysts.

Calcium

Calcium is essential for the strong bones and teeth. The presence of calcium prevents osteoporosis and weakening of teeth.

Iron

The primary function of the iron is prevent anemia in the children and adults. Furthermore, iron helps in transport of haemoglobin in the blood.

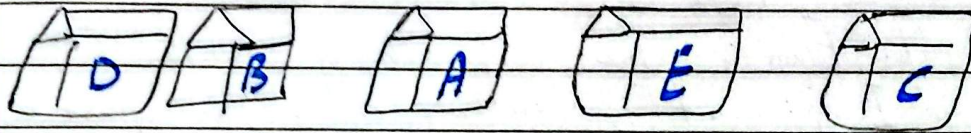
Section - B

Q.108

A.

Answer:

From the following sequence, the sequence wise position of each house is ~~can~~ opposite to each is blow;



Therefore, the house which is in the middle of the following row of houses is A.

B.

How many kilometers are you from the place you started?

Only 1 kilometer away from the place I started.

In which direction will you be running while finishing?

While finishing, I will be running in the North direction.

After taking the second turn, in which direction will you be running?

After taking the second turn, I will be running in the South direction.

From the finishing point if you have to reach the point from where you started, in which direction will you have to run?

From the finishing point, If I want to reach the point from where I started, I will run in the direction of West.

C.

Answer

- a) THRI\$ → SHIRT
- b) AOTC → COAT
- c) EOUBSL → BLOUSE
- d) KTRIS → SKIRT
- e) RETAEWS → SWEATER

The odd one from the following is SKIRT as it is worn on the lower part of the body; however, SHIRT, COAT, BLOUSE, SWEATER are worn on the upper part of the body.

D,

Answer

Formula to find the number
of triangles;
 $n \times 2$

The n number of triangles
in the figure ~~base~~ is 22.

Therefore, $n = 22$

Hence, 22×2
 $= 44$

The number of triangles
in the figure is 44.

Q: 06:

Answer

The relationship between Ahsan
and a woman is that
woman is the mother
of Ahsan.