(SECTION - B)

Q NO. 8 :-

Solution :- (A) :-

Speed of car during first half of journey = 40km/h

" " " 2nd " " " = 60km/h

Average Speed of car = ?

Distance in first half = Speed × Time

= 40 × 1 = 40km.

Distance in 2nd half = Speed × Time

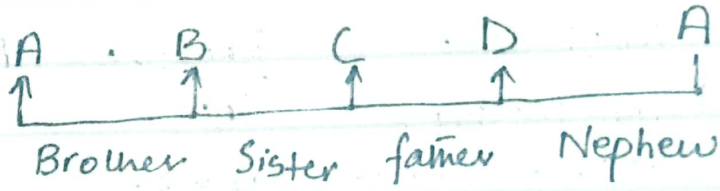
= 60 × 1 = 60km.

Average Speed = $\frac{\text{Total Distance}}{\text{Total Time}}$

Av. Speed = $\frac{60^{km} + 40^{km}}{1hr + 1hr} = \frac{100^{50}km}{2hr_{1}} =$

= 50km

8. Solution (c) :-

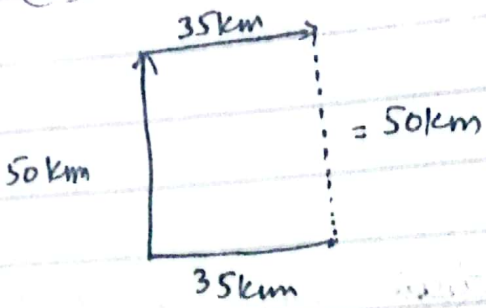


→ A is brother of C.

→ D is son of C.

→ D is Nephew of A.

Q⁸: Solution (d):-



far
Kashmala distance from original position = 50km.

Q⁸: Solution (b):-

SEARCH = 214673.

Q⁶: (b)

Solution:-

Kashif required Rs = 800.
Borrowed from brother = 20%.
" " mother = 30%.
money in bank = Rs 200.
How much more does he need = ?

Borrowed from brother = 20%.
20% of 800 = $\frac{800}{100} \times 20$ = Rs 160
Borrowed from mother.
30% of 800 = $\frac{800 \times 30}{100}$ = Rs 240

Amount he has taken = 160 + 240 = 400
" + in bank = 400 + 200 = 600-8
Kashif needs Rs 200 more.

Q⁶ :- (d :)

Solution :-

traffic light at three different road crossing change after every = 24 sec
= 36 sec
= 72 sec

Taking L.C.M of 24, 36, 72

L.C.M = 2 × 2 × 2 × 3 × 3
= 72.

Lights change simultaneously after every = 72 sec

lights will change again on = 8 : 21 : 12 hrs.

2	24, 36, 72
2	12, 18, 36
2	6, 9, 18
3	3, 9, 9
3	1, 3, 3
	1, 1, 1

S

SECTION - A

Q NO. 2 :-

(a) ANS :- Chemical bonding :-

A chemical bond is a lasting attraction between atoms that enables the formation of chemical compounds. The bond may form from electrostatic force of attraction between atoms with opposite charges, or through the sharing of electrons as in the covalent bond.

⇒ There are different types of bonding in chemistry such as :-

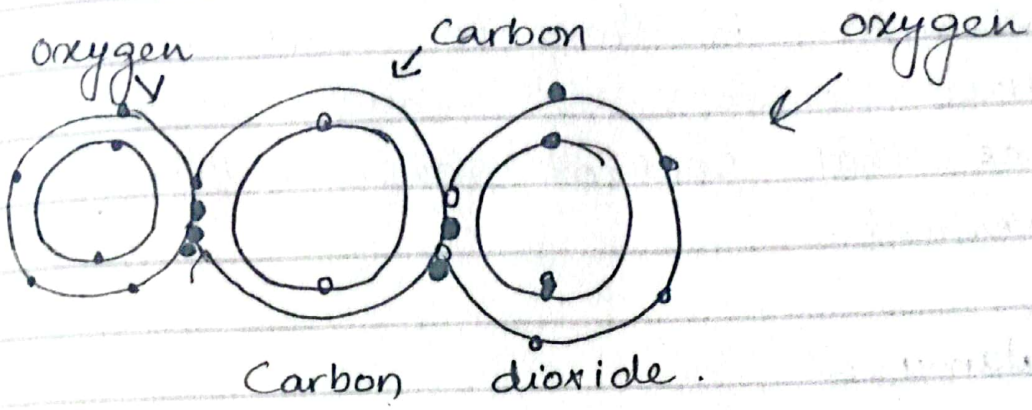
1. Ionic bond
2. Covalent bond.
3. Coordinate covalent bond.
4. Metallic bond.
5. Hydrogen bonding.

⇒ Covalent Bonding :-

In covalent bonding electrons are shared between atoms rather than donated in order for atoms of both elements to gain full outer shells. Electrons are always shared in pairs.

Example :- molecule of carbondioxide.

carbon has 4 electrons in its outer shell and oxygen has 6 electrons. By combining two oxygen atoms with one carbon atom, atoms can share electrons with each other such that each atom has a full outer shell.



(c):- Ans:- Structure and functions of Brain

BRAIN:-

Brain is part of central nervous system. Brain is control center of the body.

Structure and Function:-

There are three parts of brain:-

(a) Forebrain.
(b) Midbrain.
(c) Hindbrain

(a) Forebrain:-

Forebrain is responsible for a

variety of functions including receiving sensory information, thinking, understand, language and controlling motor function.

Parts of Forbrain:-

- Cerebrum:-
- Thalamus.

① Cerebrum:- is largest part of brain and consists of four different lobes that control senses, thoughts and movement.

② Thalamus:-

It is responsible for motor control, relaying sensory information.

ⓑ Midbrain:-

The midbrain and hindbrain together make up the brainstem. Midbra is portion of brain stem that connects hindbrain and forebrain. This part of brain is responsible for auditory and visual responses.

ⓒ Hindbrain:-

It extends from spinal cord. It helps in maintaing balance, movemen coordination and conduction of sensory

mation. It also contains medulla
longata which is responsible for
controlling breathing, heart rate and digestion

1) Cell :-

A cell is smallest unit of
living organisms and are functional units
of human body. There are different
types of cells nerve cells, muscle cells.

Structure of Cell :-

A cell consists of three parts:

1) The cell membrane.
2) Nucleus.
3) Cytoplasm.

Cellmembrane :-

This is barrier between living
part of cell and non-living environment

Nucleus :-

It is the control center of cell.
The DNA is stored in nucleus, which is
set of instructions for cell to function.
Only eukaryotic cells have a nucleus.
The most important function of nucleus
is to store cell's genetic information in form
of DNA.

(E) Cytoplasm:-

It is fluid matrix of cell. It contains dissolved ions and other materials allows for movement of materials within cell. All living cells have cytoplasm.

Cytoplasm contains organelles :-

① Mitochondria.
② Vacuole.
③ Golgi bodies
④ Endoplasmic Reticulum
⑤ Ribosomes.
⑥ Plastids.
⑦ Lysosome.

Functions of Organelles :-

① Vacuole :-

These are membranous sacs perform many functions. They store water and metabolic waste. It helps in transportation of material within cell. Plants have large vacuole.

② Golgi bodies :-

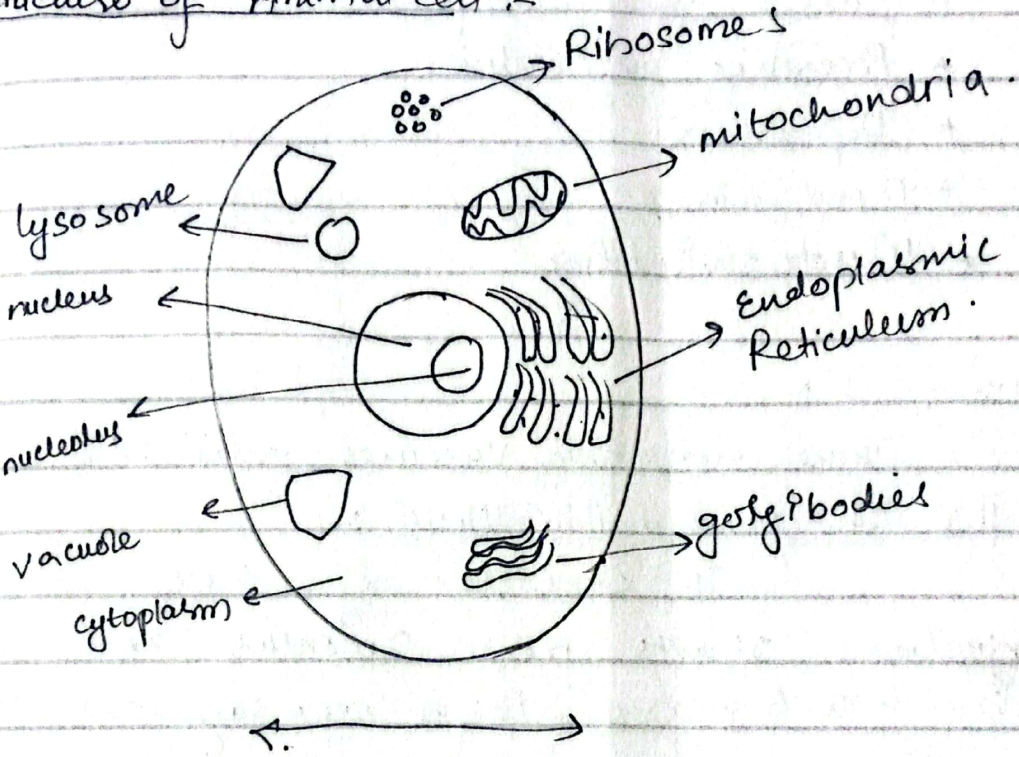
These are stacks of membranes within cell. They package materials and form vesicles for transport out of cell.

③ Endoplasmic Reticulum :-

It extends throughout cell.

It may be smooth or rough. Its function is packaging, synthesis and transport of materials in cell.

Structure of Animal Cell :-



Q^3:- (a) What is polio?

Ans:- Polio is an infectious viral disease that affects central nervous system, can cause temporary or permanent paralysis.

Causes :-

The polio virus enters the environment in feces of someone who is infected. In areas, with poor sanitation

It easily spreads from feces into water supply or by touch or food.

Symptoms :-

* Muscle and joint pain
* Breathing difficulties
* Depression
* Mood Swings.
* Muscle shrinking.

→ Treatment :-

There are two vaccines available :-

① IPV (Inactivated Polio Virus) :-

It consists of series of injections starts from 2 months after birth till 4 to 6 years. It is very safe and effective. In this vaccine inactive virus is used.

② OPV :- Oral Polio vaccine :-

It is created from weakened form of polio virus. It is low cost, gives immunity. In rare cases it revert to dangerous form of poliovirus causing paralysis. Once polio develops Once virus develops in person there is no cure.

Q.3 (b) Nervous System :-

Nervous system is a network of nerves and cells that carry messages to and from brain and spinal cord to various parts of body.

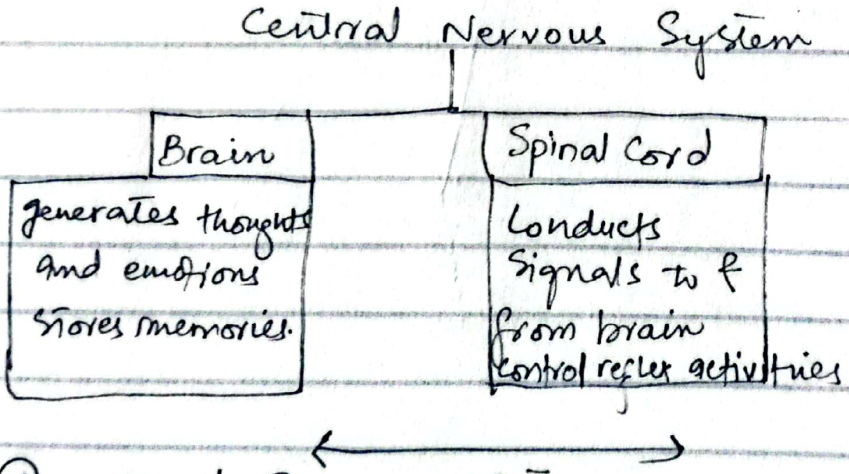
Parts of Nervous System :-

1. Central Nervous System
2. Peripheral Nervous System.

Central Nervous System :-

Consists of brain and spinal cord.

Brain :- is control center of body. It receives and processes sensory information.



Q.3 (d) : Food Preservatives :-

Techniques used to prevent food from spoiling. It includes methods such as canning, pickling, drying, pasteurization.

Benefits and Importance :-

1. Foods tasts longer
2. Dependence on seasons become less.
3. helpful in food businesses.

Antioxidants :-

These are man-made or natural substances that may prevent or delay types of cell damage.

Importance :-

It helps prevent or stop cell damage caused by oxidants.

Preserving Food.