

PART : II

Section : A

Qno: 02

Part : A

Octet Rule :-

"The tendency of an atom to have eight electron in the valance shell"

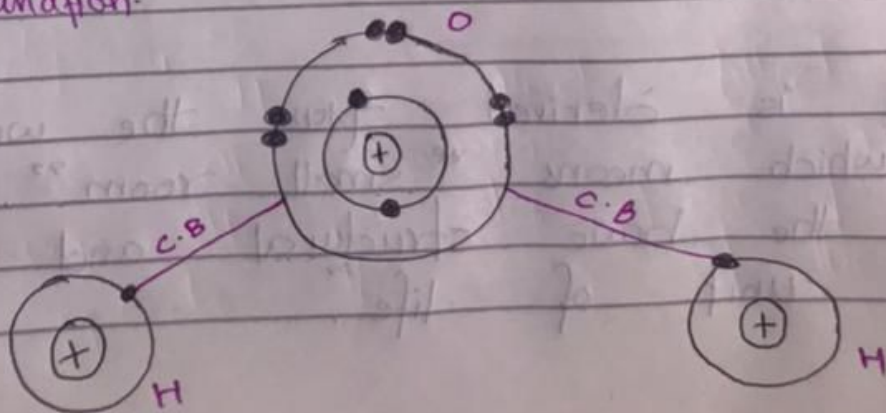
Explanation:-

Octet rule is applicable only for atom in their ground state. It failed to explain the relative stability of molecule. The shape of molecule is not predicted by octet rule. Some common example of element expanded to octet rule are sulphur, phosphorous, silicon and chlorine. These 4 element are in P block of element 3 period 3.

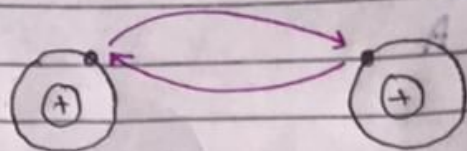
Covalent bond :

"A bond which is formed by mutual sharing of e^- between atoms"

Explanation:



H₂:

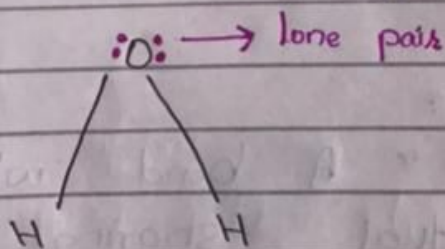


Complete transfer is not possible so, H each hydrogen atom share their e⁻ with each other.

Covalent bond may be polar and non-polar. Covalent bond are formed single, double and triple on the basis of sharing of no. of e⁻

Part: b

Water molecule is angular in structure due to lone pair repulsion. Lone pair is the pair of e⁻ present in the outermost shell which does not take part in bonding

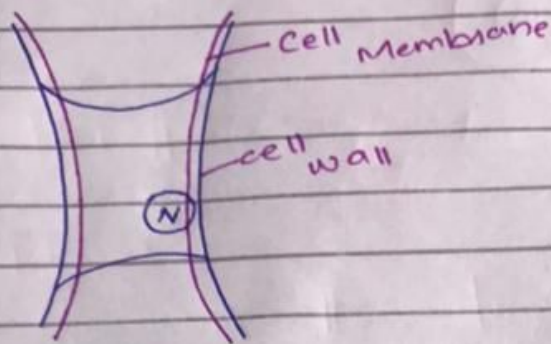


Part: D

Cell :-

Cell is derived from the word cellula, which means "small room". It is the basic structural and functional unit of life.

Structure of Cell :-



plant cell



animal cell

Organelles of Cell :-

1. Cell wall :-

Cell wall is an outermost layer in case of plant cell. Cell wall is absent in animal cell. It gives protection, shape and support to the cell. It is made up of cellulose.

2. Cell Membrane :-

It is made up of protein and lipids. It performs same function as cell wall in animal cells.

3. Cytoplasm :-

It is fluid filled region in between cell membrane and nuclear membrane. It is store house of the cell. It expands the size of the cell.

Section : B

Q#06 : (A)

Sol :-

Total amount = \$370

Acc to given condition,

1st part : 2nd part : 3rd part

3 : $\frac{1}{4}(5)$: 5

Multiplying each part by 4.

$$4 \times 3 : 4 \times \frac{1}{4}(5) : 4 \times 5$$

$$12 : 5 : 20$$

Now

Total parts = 37

share of each part = $\frac{\$370}{37} = \10

So;

$$\text{1st part} = 12 \times 10 = \$120$$

$$\text{2nd part} = 5 \times 10 = \$50$$

$$\text{3rd part} = 20 \times 10 = \$200$$

Q#06 : (B)

Sol :-

Total amount required = 800

Borrowed from brother = 20%.

Let rupees borrowed from brother = $\frac{x}{800} \times 100 = 20\%$.

$$= \frac{x}{800} \times 100 = 20\% \times 800$$

$$= \frac{x}{100} = 20\% \times \frac{800}{100}$$

$$x = 160 \text{ Rs}$$

Now

funded from mother = 30%

Let x rupees funded by Mother then:

$$\Rightarrow \frac{x}{800} \times 100 = 30\%$$

$$\Rightarrow x \times 100 = 30\% \times 800$$

$$\Rightarrow x = \frac{30\% \times 800}{100}$$

$$\boxed{x = 240 \text{ Rs}}$$

Bank amount = 200

Total amount he had = $240 + 160 + 200$
= 600 Rs

Remaining amount = $800 - 600$

$$\boxed{= 200}$$

Q#6:

Part (D)

As

1st light changes after = 24 sec

2nd " " " 36 sec

3rd " " " 72 sec

So,

3rd light have highest revolution of time

then:

1st light changes with 3rd light after
3 revolution = $24 \times 3 = 72$.

2nd light changes with 3rd light after
2 revolution = $36 \times 2 = 72$.

Therefore all light change simultaneously
after 72 sec = 8 : 21 : 12 hrs

Q: 06

Part: C

As.

Red balls in 1st bag = 3

" " " 2nd " = 8

" " " 3rd " = 4

Total red balls = $4 + 8 + 3$

= 15

Then;

Probability = $\frac{\text{No. count in 3rd bag}}{\text{Total balls.}}$

$$P = \frac{4}{15}$$

Q#08

Part: A

Consider the car travel 100km in 1 hour.

So;

car runs in 1st half of hour = 40kmph

" " " 2nd " " " = 60kmph

then avg speed of car = $\frac{40+60}{2}$

$$= 50\text{kmph}$$

Part: B

R O S E = 6 8 2 1

C H A I R = 7 3 4 5 6

P R E A C H = 9 6 1 4 7 3

S E A R C H = ?

We have from above codes.

$$S = 2$$

$$E = 1$$

$$A = 4$$

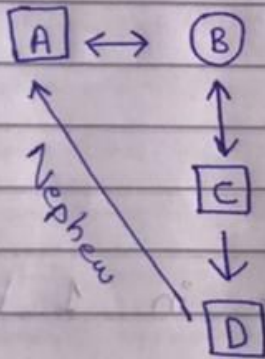
$$R = 6$$

$$C = 7$$

$$H = 3$$

SEARCH = 2 1 4 6 7 3

Part : C



\Rightarrow D is a Nephew of A

Part : D

As the distance
BC and AD is
equal, which is 50 km
So; Karmala is 50 km
away from its original
position.

