

(Part II)
(Section 2)

Q no # 07 (a)

IQ stands for Intelligence Quotient.
It is a monetary tool through which the
person intelligence and abilities can be obtained
easily. The
The IQ varies from person to person, depends
on various factors.

Factors that can effect IQ of a person.

① Culture:

The culture can effect the
the IQ level of a person.

② Environment in Surrounding:

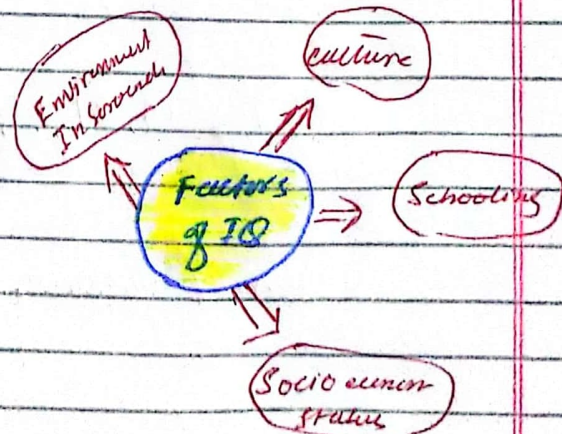
The surrounding environment plays an
important role in the IQ of person.
If the surrounding environment based on ex
focusing on education, the priorities of
the IQ getting comes towards the education.

③ Schooling

Schooling also play role
in effecting the IQ.

④ Socio-Economic Status.

The social and structure
also having the effect
on the IQ of person.



Q No # 07 (b)

Given data

$$\text{Radius} = 4 \text{ cm.}$$

Required data

Circumference of the circle = ?

Solution

As we know that circumference of the circle is

$$C = 2\pi r$$

$$\pi = 3.14 \text{ \& } r = 4 \text{ cm.}$$

$$C = 2 \times 3.14 \times 4 \text{ cm}$$

$$= 8 \times 3.14$$

$$= 25.12$$

$$C = 25.12 \text{ cm}$$

Ans.

$$\begin{array}{r} 3 \\ 3.14 \\ \hline 25.12 \end{array}$$

Q No # 07 (c)

Given data

20, 22, 21, 23.

Required data:

mean, median, mode, range.

Solution

Mean : Mean = $\frac{\text{sum of all the numbers}}{\text{number of observations}}$

Mean = $\frac{20 + 22 + 21 + 21 + 23}{5} = \boxed{21.4}$ Ans

Median:

Median: The mid value in the arranged data.

arranged = 20, 21, 22, 23

Median = $\boxed{21, 22}$

= $\frac{21 + 22}{2} = \frac{43}{2} = \boxed{21.5}$ ✓
Ans

Mode: the most repeated age.

20, 22, 21, 21, 23

$\boxed{\text{Mode} = 21}$ Ans

Range: Difference of maximum & minimum value.

20, 22, 21, 21, 23

Range = 20, 23

= $23 - 20 = \boxed{3}$ ✓
Ans

Q No 7 (d)

Given Data:

The Investment of Tahir for a year = $\text{Rs } 15,000/\text{year}$

" " " Umar after 5 months = $\text{Rs } 30,000/(7\text{ months})$

" " " Usman after 9 months = $\text{Rs } 45,000/(3\text{ months})$

Total profit = $\text{Rs } 406,000/(12\text{ months})$

Required data:

Share profit for each one.

Solution

The invest become for each

Tahir = $15,000/-$

Umar = $\text{Rs } 30,000 \times \frac{7}{12} = \text{Rs } 17,500$

Usman = $\text{Rs } 45,000 \times \frac{3}{12} = \text{Rs } 11,250$

Total - investment becomes

= $15,000 + 17,500 + 11,250 = 43,750$ Rupees.

→ percentage of each will become.

$\frac{\text{Particular}}{\text{Total}} = \frac{406,000}{43,750} = \frac{\text{Rs } 406,000}{\text{Rs } 43,750} = \frac{\text{Rs } 406,000}{\text{Rs } 43,750}$

→ = $\frac{15,000}{43,750} = \frac{3}{10}$ Tahir

= $\frac{17,500}{43,750} = \frac{7}{15}$ Umar

= $\frac{11,250}{43,750} = \frac{9}{35}$ Usman

P.T.O

Now the net profit will become out of total profit.

$$Tahir = 406,000 \times \frac{3}{8} = \text{Rs } [152,250]$$

$$Umar = 406,000 \times \frac{7}{16} = \text{Rs } 177,625.$$

$$Usman = 406,000 \times \frac{9}{35} = [105,125 \text{ rupees}]$$

QNO #08

(a)

Given

BROTHER written as C P D G S N O A

Required

SISTER code

Solution

SISTER will become

HUKSKD

| | | | | | | |
|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G |
| H | I | J | K | L | M | N |
| O | P | Q | R | S | T | U |
| V | W | X | Y | Z | | |

In the given code, 7 step back,
12 step Forward, 8 step back, 7 step Back,
6 step Forward, and 12 step Forward.

Qno 8 (B)

Given data.

1, 2, 6, 21, —

Required Data

~~1, 2, 6, 21, 50~~
missing number

Solution

Identify the missing number

1, 2, 6, 21, 50

1, 2, 6, 21, 50
1, 2, 6, 21, 50
1, 2, 6, 21, 50

Qno 8 (d)

Average temperature of 7 days = 33 degree.

1st 3 days temperature = 30°C.

and 3 days temperature = 35°C.

Now the average of these 6 days been
been 32.5

and the last fourth day temperature
1°C higher than 35°C.

4th day of week = 36°C.

7 days temperature would
be = $\frac{30+30+30+35+35+36}{7} = 33^\circ\text{C}$

Q No 2 (b)function of arteries:

Arteries are the blood vessels, that carries blood away from heart to the various part of the body.

This blood having oxygen, and arteries takes this blood to the whole body.

The wall of the arteries are muscular so that they could maintain the blood pressure of the body.

The largest artery that carry blood from the heart is called Vena cava.

function of veins

The veins are also the blood vessels that carries the deoxygenated blood from the parts of the body to the heart. The largest vein is called Vena cava. There are two type of Vena cava. Upper & lower Vena cava that carries the ^{blood} from the upper parts of the body and blood from the lower part of the body of heart respectively.

Capillaries: Capillaries are the smallest blood vessel that functioned the exchange between arteries & veins, the oxygenated and deoxygenated blood respectively.

QNO#02 (c)

Why do atoms form chemical bond?

Explain structure of water?

Solns

Chemical Bond:

A chemical bond is force that holds the atoms together. It contains two or more atoms.

Why they form a chemical bond.

The atoms form a chemical bond for the completion of valence shell of atom in a ionized state.

Either they complete octet or doublet of valence shell.

e.g

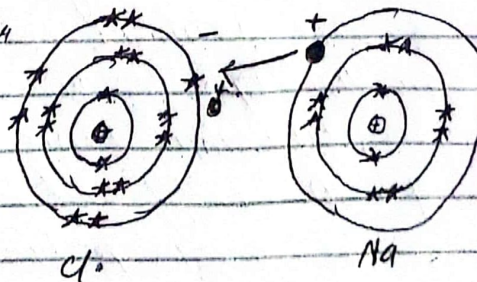
• NaCl

in this example

Atomic no. of Cl = 17.

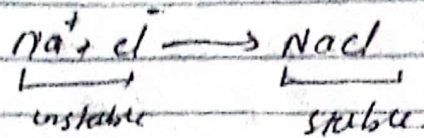
and " " Na = 11

applying $2n^2$ formula for ~~outer~~ shell electrons.



The chlorine need one electron to complete its last shell and the sodium (Na) has one electron in unstable form.

So, the (Na) gives one electron couple
and chlorine get one (Cl) electron and complete
its valence shell.



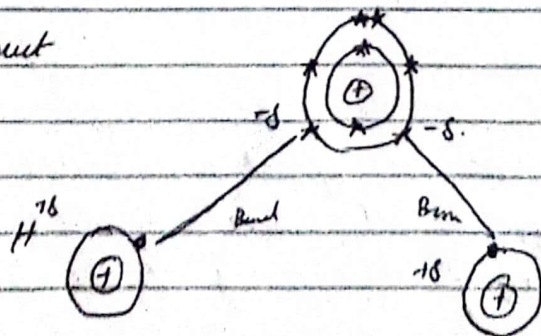
NOW they gain stability, that's why
they form chemical bond to
gain stability of both the atoms.

Structure of water (H₂O).

The water has hydrogen chemical
bond.
Two hydrogen (H⁺¹) and One oxygen (O⁻²)

Oxygen atom = 8
and Hydrogen = 1.

Struct



They are Hydrogen are slightly bent because
of lone pairs of oxygen.

QNO#02 (5) (d)

Conductors

Conductors are the materials made of atoms having large number of free electrons.

Due to these large number of free electrons they have high conductivity.

Example

Copper, a high conductive element.

Semiconductor

The semiconductors are conductors having optimum number of free electrons. They are neither insulators nor conductors fully but between them.

Example

Silicon and germanium, used in diodes.

Metal:

Metals are the good conductors made up of metallic bond. Metals having a strong conductivity of electricity.

Example:

Iron is metal and a good conductor.

Plastics

Plastics are composed of polymers. They are mainly insulators, do not conduct having no free electrons.

Example

polyethylene bags are largely used in packaging.

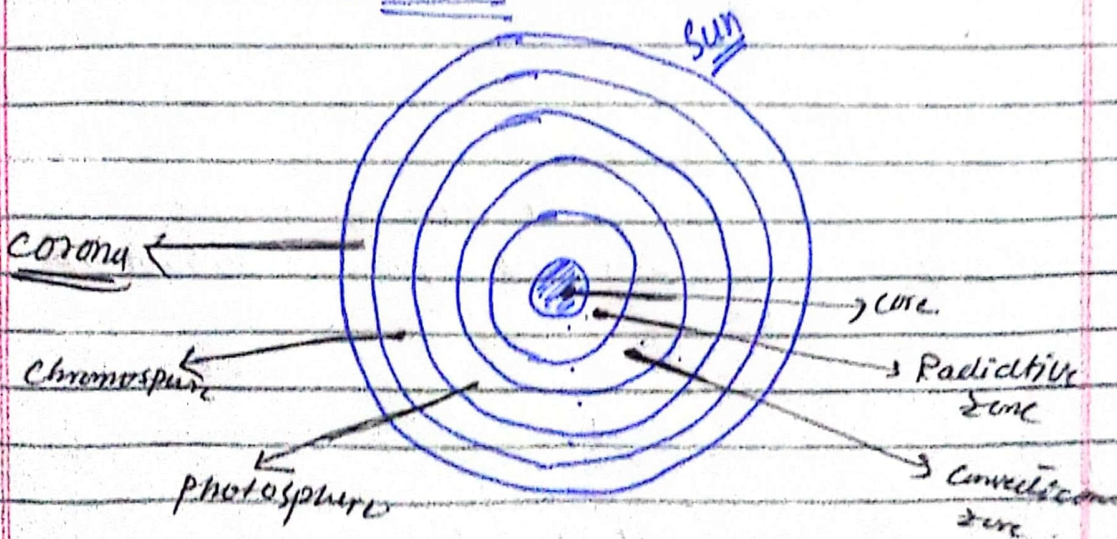
CERAMICS

They are also non-metallic insulators, but they are hard and do not conduct electricity.

Example

Titanium, used for protection of sensitive materials.

Photob (b)



Core:

The core of the sun is the real powerhouse. In that place the fusion takes place

Radiative zone.

Between the core and convective zone. The energy passes from the core to the convective zone passes through Radiative zone

Convection zone

In this place the hot plasma takes place. Extends from radiative zone to the visible

Photosphere

The visible white light emerge from photosphere. It is comparatively coldest region of the sun.

Chromosphere

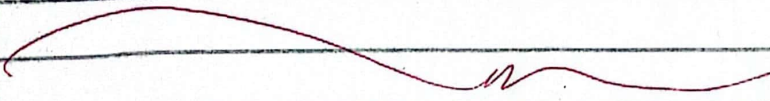
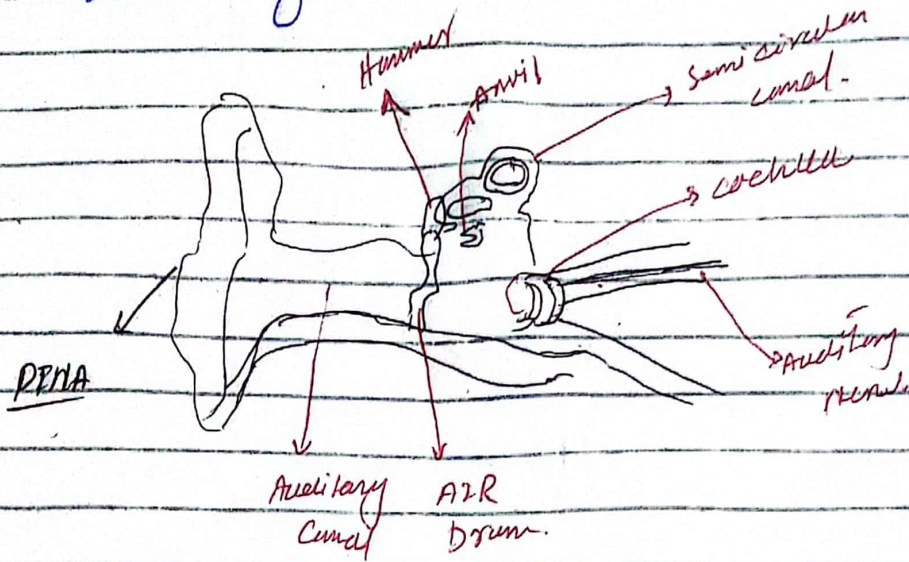
This always is also the visible surface area. Emits red light and ultraviolet.

CORONA

The visible surface and outermost surface, visible in solar eclipses as a white

Croty (d)

Structure of Ear:



Time wave