QNo 3:- (a)

Atoms form chemical bond to
their ... ...
bond ... they ... or lose an
electron. In both cases, the atoms
shift from exciting state to stable
state.

For example:

Exciting ... Gaining

Donate ... Exciting

Stable state.

Stable state

Here, Sodium has an electron extra
and the outer most shell of chlorine is
not completely filled so, ...
gains ... ... to

20/20

Dos and Don'ts for Generaral Science & Ability Paper

Mock (2) GSA M T W T F S

Hi there, you've done well. Know that acquiring knowledge is one thing and reproducing it in paper acccording to what's asked is another. There are a few things I would like to highlight.

1. A 5 marks part requires at least 2 and at max 3 sides of a paper. Know that there can be two or three parts of a question and their marks are divided accordingly. So, address all of them in a just manner.

2. Focus on time management. You get 35 minutes to solve one question and about 8 minutes per 5 mark part. Manage your time accordingly.

3. You need to understand that your paper is supposed to look more scientific than theoretical. So, add flowcharts and diagrams where required.

4. Your handwriting and neatness can be really impactful. Avoid cutting and overwriting.
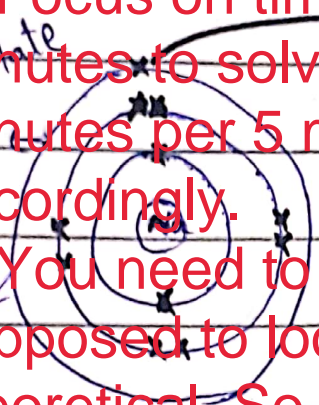
5. Focus on your spellings and your grammar. Here, in GSA there's no deduction in marks but your expression will definitely create an impact.

6. In ability portion, give explanation for analytical ability question in words. You need to understand that a 5 mark part requires all steps written and explained.
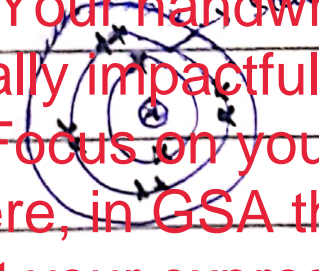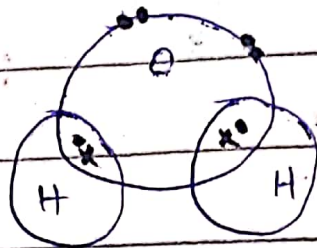
Good luck for CSS 2025. You're gonna rock in sha Allah. :)

by forming ionic bond with it
and make itself stable.

Covelant bond:

A type of chemical bond in which
atoms mutually share a pair of
electrons to complete their outer
most shells.

→ Water formula is H_2O

The two hydrogen atoms share a
pair of electrons to fill the outer
most shell of oxygen and make
water molecule.

QNo 3 (b)

Doping: Doping is a technique in which number of electrons are increased to make an atoms more conductive. such as semiconductor electric conductivity is increased with this tecnique.

Types of ceramics

① **Made of clay:**
Ceramics which are made by clay and through heating procers they are shaped such as potteries, dishes etc.

② **Silica :** Ceramics which are used in electronic devices are made of Silica. such as Switches etc.

QNO3:-(c):

Global warming:- It is long-term heating of earth's surface Through pollution by the industries and other human activities.

Merits of Global Warming:

1) It makes weather bearable in the temparate zones where temperature is very low.

2) It reduces mortality rate in the cold regions

3) It increases productivity of winter lands, where farming is difficult due to extreme cold winter

4) It decreases the number of frozen Zones on the earth and make these zones liveable.

e.g:- Antarcatica, siberia.

Demirts of global warming.

① It increases temperature of the earth which cause heat-waves which

badly effect the life of people.

2) Increase floods due to melting of glaciers

3) Drought situations may occur due to high flesh floods

4) Loss of species and wird forests

5) More health risk due to extreme heat waves and pollution

6) Floods cause poverty and displacement.

QNo3 (d):-

Polio: It is type of disease in which a child's mucoles stops working and cannot move its body parts easilly.

Causes of polio:

It is caused due to containmented water and food and unhygenic enuivonment. It is also speead from the faeces of infected person.

Symptoms of polio:

High fever, headache, vomiting and nausea. The child may face stiffness of the neck and pain in the limbs.

Challenges to eradicate polio from Pakistan:

The utmost challenge is The misconception about the Vaccine of polio especially in Balochistan and KP. The people of these areas donot accept the treatment of vaccine.

The other challenge is to provide vaccine in the far flung areas of villages where there is also a security issue.

Moreover, people are illiterate they do not know the complications of this disease and the benefits of vaccination. They still believe

in unauthentic divine things. They believe in clergy and churches.

Last but not the least, Pakistan face economic issues - It cannot provide vaccines to each and every child and eradicate it completely.

QNo 4:- (a)

Bile: It is a fluid which is made and released by the liver. It is stored in the gallbladder. Bile helps in the digestion of food. It carrys wastes from body and transport it to the intestine to discharge them from the body.

Bile also break down fats during digestion and also helps in fat-soluble vitamins. Bile break down fatty acids and transfor them to digestive

tract from where the wastes get discharge.

Bile discharge the excess cholestrol which are harmful for the health. It maintains the diet of health automatically. It keeps acidic PH level balance by providing alkaline fluid.

QNo4: (b)

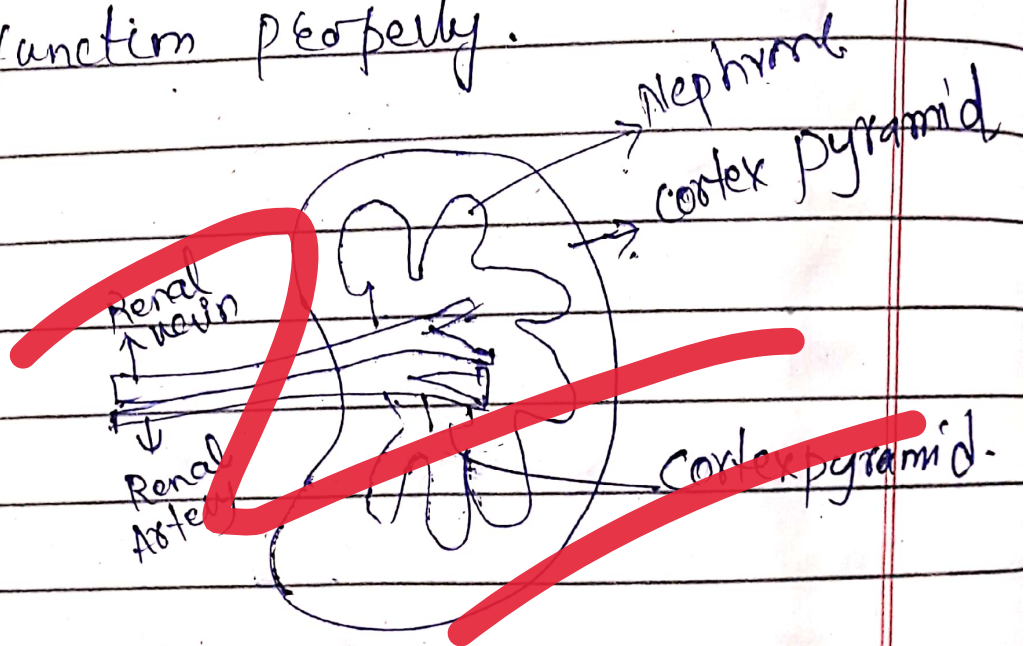Kidney is also part of the excretory system which is responsible for excretion of waste materials through urine.

Kidney filterates the blood and discharge the waste of blood either through the large intestine and urine.

Nephrones in the kidney does the work of secretion and reabsorption. It selectively

absorbed the nutrients, acids which are used by the body, and builds harmonys in the body.

Nephron filters the blood, kidney reabsorbed the acids selectively and discharge the acids which are harmful for body. In this way it regulates the PH level of body to function properly.

Also add structure of nephrons

Q No 4 :- (d)

(1) **Appendicites :**

Appendicites happens inside
the appendix when it gets blocked.
It may also happen due to
infections by viruses, bacterias
and parasites, in the digestive
tract.

One of the reasons of appendix
pain is the blockage of tube
between large intestine and
appendix.

(2) **Anaemia**

Anaemia is shortage of blood
in the body. It occurs due to
Malaria and fever for longer
time in which the blood in
the body reduced. It also happens
due to deficiency of Vitamine (A).
Most of the hapetitus patients face
this due to ineffectiuness of liver

(3) **Spleen:** Spleen is located on the upper left side of the abdomen under the ribs and above the stomach.
It filters the blood and damage old red blood cells.
It maintains quality of blood in the body.

(4) **Myopia:** Nearsightedness in which one cannot see the close far objects clearly, but can see the close objects clearly. It happens due to extra use of mobiles and laptops. People cannot see far objects clearly due to bending of light in the eyes.

(5) **Isotones:**
Atomes that have same nutron number but different proton

number . It is the opposite of
Isotopes .

Q No 7 : (b)

Average age of three boys = 15 years.
Ratio of their ages = 3:5:7
youngest boy's ~~of the~~ age = ?

$$3x + 5x + 7x = 15$$

$$\frac{15x}{3} = 15$$

$$15x = 15 \times 3$$

$$15x = 45$$

$$x = \frac{45}{15}$$

$$\boxed{x = 3}$$

The youngest boy's age = 3x .

$$3 \times 3 = 9 \text{ years} .$$

Q NO 7: (c)

ii) 8, 19, 52, 151, 447, ...

       11   33   99   109

The difference between the numbers in series is divisible by 11 except "447" in which the difference is "109" which is not divisble by "11". So, the wrong number is 447.
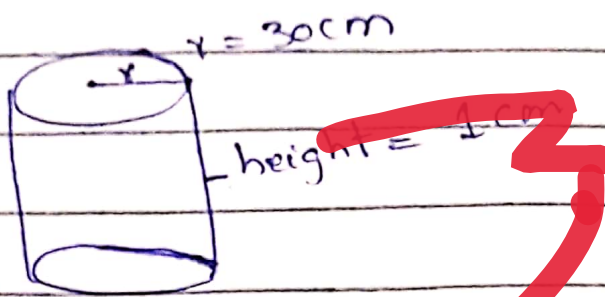
iii) 11, 13, 17, 19, 23, ...

In the series the number are prime number which are not divisible by other numbers so the number in the series next to "23" will be "29" as "29" is also a prime number.
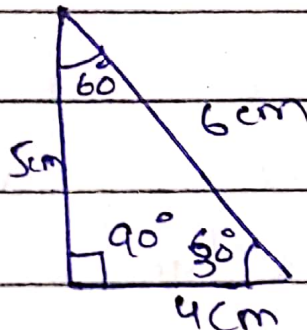
Q NO 7: (a)

Volume of cylinder?

$$V = \pi r^2 h$$

$$r = 30 cm$$

height = 1 cm

$$V = 3.14 \times (30)^2 \times (1) \ cm$$
$$V = 3.14 \times 900 \ cm$$
$$V = 2.82600 \ cm \qquad \text{Ans.}$$

Q No 7: (d)

60°

6 cm

5 cm

90° 30°

4 cm

According to the length of the sides given in Question. The triangle is right angle triangle in which angles are 90°, 30°, and 60°.

QNO 6:- (b)

Original price of shoes = $80

Discount on price = 80 × 15%

Sales tax = 10%

80 × 15% = 12

80 - 12 = 68

68 × 10% = 6.80

68 - 6.80 = 61.2

The final price will be 61.2 $

QNO6: (c) :-

Total distance covered = 42 km

Average distance per hour = 36 km/hr

42 - 36 = 6 km

On average 1 km = 1 minutes

So, it takes 1 hour and 6 minutes.

If starts at 4pm then will reach at 5:06pm

* **Solid Waste Management System**[4]

The activities associated with the management of municipal solid waste can be grouped:

(a) **Waste generation:**

→ Wastes which can neither be reused nor recycled. These are unvalued wastes are thrown away.

→ Valued wastes are gathered for disposal.

(b) **Handling, sorting, storing and processing**

Collect wastes, sort them according to this we can store few, Rest wastes are sent for processing.

* **Most favoured options**

[Reduce] lowering the amount of waste produced.

[Reuse] Using materials Repeatedly

[Recycle] Using materials to make new products

[Recovery] → Methan for electricity
Recover energy from waste

[landfill] Safe disposal of waste to landfill

* **Least favoured option**

Structure of Sanitary landfills

① **cells :** Construct cells in the selected areas. to dispose wastes.

② **Bottom liner :**
Bottom liners are constructed in the cells by using durable puncture-resistant Synthetic plastic with combination of clay
Compacted

soils. It will not damage the ground water and air.

(3) Leachate collection system:

leachate is a highly contaminated liquid. It is generated from decomposition of garbage. It destroys ground water through percolation process.

→ To stop percolation of water and secure ground water, the landfills is constructed a sloped to a low point, called a "Sump". The leachate are trapped inside the landfill are collected, removed from the landfill and treated thereform.

(4) Methane collection system:

Inside the landfill, Methane is produced due to decomposition of trashs by the bacteria in the absence oxygen. Methane can burn and explode which destroys the area and increases air pollution.

→ To reduce this, pipe are embedded

in the landfill to extract/collect methane gas and use them to generate electricity at a small power plant.

(5) Cover (or cap): A cap is required to cover daily wastes to reduce pollution and health hazardeous. For this, covering is performed to control of odor of trash. It is permanently covered with a combination of a layer of polyethylene plastic.

Industry landfill: Industry landfill is like open dumping system, which pakistan is currently using. It is very hazardeous for health and environment.