

Dos and Don'ts for General Science & Ability Paper

Hi there, you've done well. Know that acquiring knowledge is one thing and reproducing it in paper according 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. :)

ii) Covalent Bond

is formed by mutual sharing of atoms. As far as the purpose of this bond is concerned, it is also formed for stability.

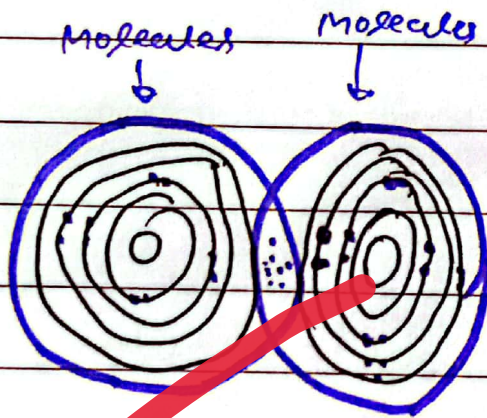


Fig: Showing formation of Covalent bond.

General Characteristics of Covalent Bond

- weaker than Ionic
- formed by mutual sharing

(b)

Doping

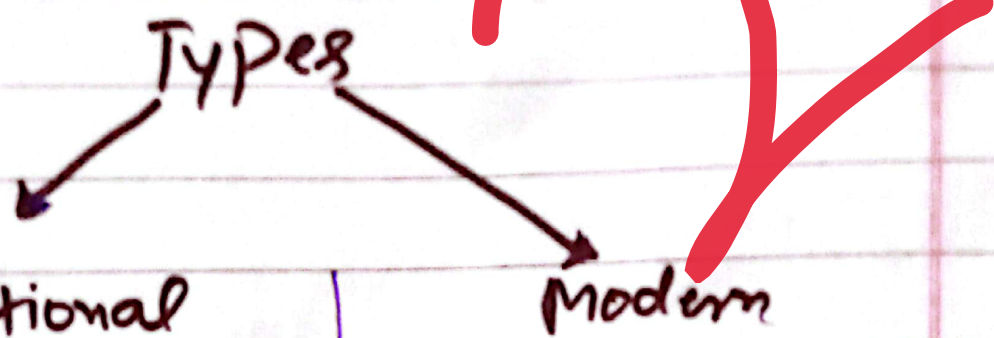
is a process through which impurities are added into chemicals. The pure chemical of periodic table undergone the process of doping by adding impurities.

Ex# The element from 5th group of periodic table known as phosphorus. It is a pure chemical. When the impurities mean other substances would be added into it. It would become a doped element.

Ceramics

are the non-organic material that are shaped into a desired result by heating. Most ceramics are made from clay.

Ex# Washroom items, plates, Shutter.



Traditional

are made up of clay by heating.

- Bricks, washroom items, plates etc.

Modern

are not made up of traditional method and clay.

Rather, a chemical is used for their formation

- Ex. Space shuttles
- Helicopters etc

(d)

Polio

is a dangerous disease that could result in either complete paralysis or death. Only Pakistan and Afghanistan are facing the threat of polio. It is also known as "polymelitis".

Symptoms

- Fatigue
- Weakness
- Fever
- Headache

- Cure

Polio vaccine is a best source for restricting this disease. Various doses are necessary.

2-4 → 1 dose

4-6 → 2 dose

6-12 → Booster dose

⇒ Challenges in Pakistan for eradication of polio

- Lack of awareness about the disease
- Conservative attitude about polio vaccine: people consider it illegal
- Terrorism Threat: polio workers are killed ~~or~~ in tribal areas. In Feb, 2024, Two polio workers were killed
- Misinterpretation of Religion by Mullahs: Mullahs have announced it illegal
- Carelessness of the concerned authorities

(C)

Global Warming

It is not a region-specific phenomenon rather it has become a global issue. It refers to rise in temperature due to acceleration of green house gases.

~~IPPC~~ IPCC: global temperature will cross 1.5 degree celsius until 2050. due to global warming.

→ Merits and Demerits of Global Warming

→ Merits

- natural process of green house gases is beneficial for humanity
- necessary for human survival

→ Demerits

- excessive rise in temperature: IPCC report
- results in heat stroke
- Karachi: people were ^{died} killed due to heat stroke

- necessary for
Crops growth

- necessary for
maintaining balance
of seasons on
Earth

• rise in global
sea level

• melting of glaciers:
Antarctic glaciers are
melting

• Wild Fire: Global
Forest watch describes
global warming the main cause

• Food insecurity: Impacting
agricultural productivity.

• The demerits of global
warming are more in
number than its benefits

Question 02

(9)

Artificial Intelligence


is a new technological advancement that has the potential to imitate human intelligence. This was firstly proposed by Alan Turing and Johan McCarthy.

New electricity

is known as new electricity because of its resemblance with electricity.

Resemblance in functioning of electricity and AI

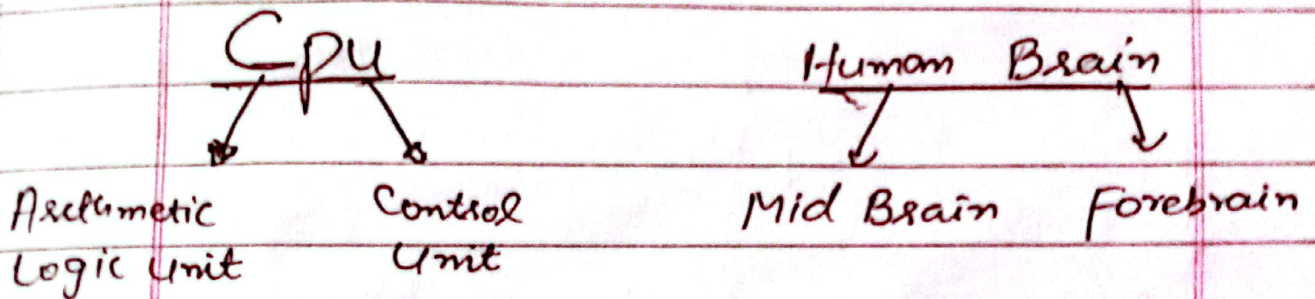
AI	Electricity
• reducing human burden of work	reduced human burden of work

- | | |
|---|--|
| • Accelerating the pace of work with robots | Accelerated the pace of work |
| • replacing many jobs through the process of automation | Replaced many jobs such as home industries |
| • Killing humans with autonomous weapons | proved lethal as it can take human life |
| • Bringing revolution as well
Stephan Hawking:
"AI is revolutionising, revolutionising this generation" | Brought revolution in human life |
- 

(b)

CPU

is known as "Central Processing Unit". It is a brain of a computer and it also has resemblance with the working of human brain.



Resemblance in Functioning

CPU	Human Brain
<ul style="list-style-type: none"> • Solely responsible for the functioning of whole of the computer 	<ul style="list-style-type: none"> • Solely responsible for the functioning of whole of human body
<ul style="list-style-type: none"> • Controls the functioning of other parts of Computer 	<ul style="list-style-type: none"> • Controls the functioning of human organs

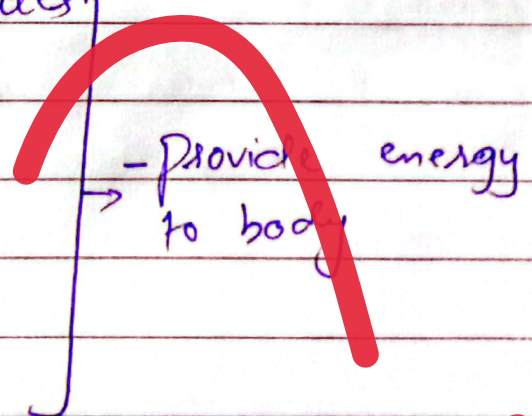
- | | |
|---|---|
| <ul style="list-style-type: none">• defines the tasks of the computer | <ul style="list-style-type: none">• Orders human organs to perform a task |
| <ul style="list-style-type: none">• Stores essential information of computer | <ul style="list-style-type: none">• stores the memory of human beings |
| <ul style="list-style-type: none">• Without CPU, Computer is just a box of material | <ul style="list-style-type: none">• Without Brain, humans are a collection of bones and meat. |
| <ul style="list-style-type: none">• ALU performs division, Subtraction, addition | <ul style="list-style-type: none">• Human brain solves problem afflicting humans |

(iii) Balanced Diet

is known as a diet that includes all the essential nutrients for the complete growth of human body. The deficiency of one nutrient result in poor growth. WHO has recommended balanced diet for every humans.

Components of Balanced Diet

- * Carbohydrates
- * Protein
- * Minerals
- * Vitamins
- * FATS
- * Water



Excessive intake of one nutrient can also create problem for instance, excessive intake of protein could create "Heart related" problems.

Deficiency of Vitamin A B C

Vitamin A

Sources: Vegetables of green leaf
Milk

Deficiency: Results in "Night Blindness"

Vitamin B Complex

→ B₁, B₂, B₃, B₆, B₁₂, B₄

Sources: Vegetables, Milk, Egg,

Deficiency: Results in "Beri Beri"

Vitamin C

Sources: Citrus Fruit, Orange
Vegetables,

Deficiency:

(iv)

Working of Optical Fiber

Optical fiber has replaced traditional copper wires for the transfer of signal. It effectively transmits signal. First of all signal go into transmitter of fiber that convert them into electrical signal or light. The they travel towards receiver and receiver again converts them into voice.

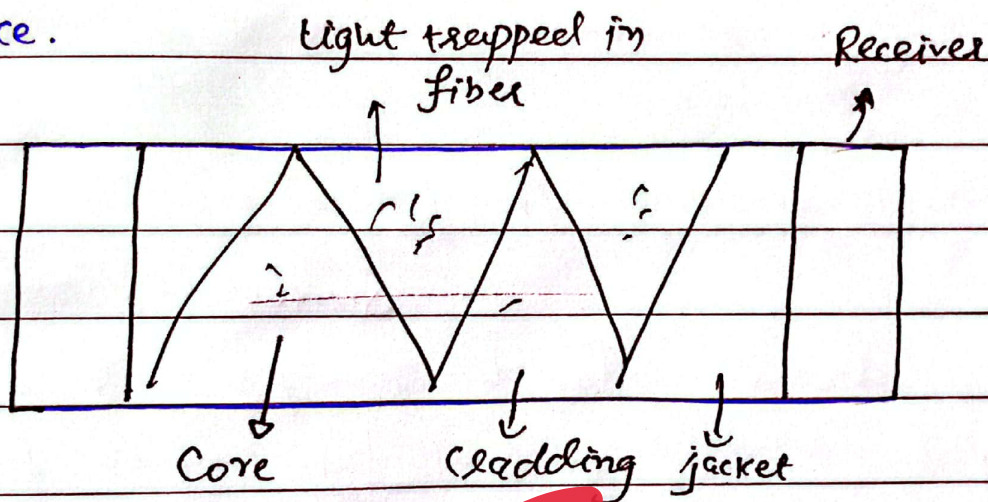


Fig: Showing the working of optical fiber

GPS

is referred as "Global Positioning System". It is used

for determining the location. Navigation satellites are used for it. Currently one navigation of US is being used for all people across the world.

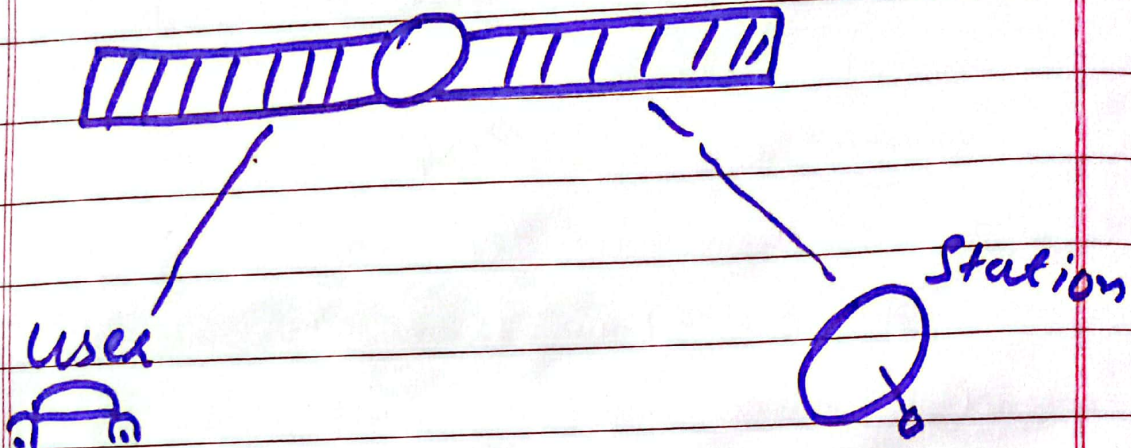


Fig: Working of GPS

Measurement of Location

Satellites measure locations with the help of sensors and light emitted by objects. The satellites capture the image or location of an object with the assistance of sensors and light.

Date _____

Section II

Question of

(d)

Given data Jumbled words

i) Teninsupelled ii) hweti

Required: Arrangement of words.

First we take ~~Teninsupelled~~
it could be arranged as

= Unprecedented

= Unprecedented

Secondly, we can arrange hweti

as

= White

(b)

Cost of shoe original = 80\$

discount = 15%

Sales Tax = 10%

Final price = ?

Let's find discount

$$\frac{15}{100} \times 80$$

$$= \frac{15 \times 8}{10}$$

$$= \frac{120}{10}$$

$$= 12$$

$$= 12$$

$$= 80 - 12 = 68 \text{ discount price}$$

Now find Sales Tax

$$= \frac{10}{100} \times 68$$

$$= \frac{680}{100}$$

$$= \frac{68}{10} = 6.8$$

Now we add discount price & sales tax

$$= 68 + 6.8$$

$$= \boxed{74.8} \text{ @ final price}$$

Question 08

(d)

Distribution of 4320 among Zain

Aslam Ashraf

Zain = 2 parts

Aslam = 3 parts

Ashraf = 7 parts

Total number of part = $2 + 3 + 7 = 12$

Distribution

Zain

$$\frac{2}{12} \times 4320$$

$$= \frac{2 \times 4320}{12}$$

$$= \boxed{720}$$

Aslam

$$= \frac{3}{12} \times 4320$$

$$= \frac{3 \times 4320}{12}$$

$$= \boxed{1080}$$

Asmaf

$$= \frac{7}{12} \times 4320$$

$$= 7 \times 4320$$

$$= \boxed{2520}$$

(b)

- 8000 Total pocket money
 - Hassam, Ali, Akbar, Nasir, Shahbaz pocket money?

Hassam gets $\frac{1}{3}$ rd of Ali

$$H = \frac{1}{3} \text{ of Ali}$$

Ali five times much than Akbar

$$A = 5K$$

Akbar has thrice much as Nasir

$$AK = 3$$

Shahbaz equal to Nasir & Ali

$$Sh = \underline{\text{Nasir}} = \underline{\text{Ali}}$$