Dos and Don'ts for the General Science & Ability Paper

Hi there — you've prepared well! Remember, knowing the content is one thing, but presenting it in the paper exactly as required is another. Here are a few key points to keep in mind:

1. For a 5-mark part, aim to write at least 2 and at most 3 sides of the answer sheet. Often, a question has two or three parts, and the marks are divided accordingly — so address each part fairly.
2. Manage your time wisely — you have about 35 minutes per full question, which comes down to around 8 minutes for each 5-mark part. Stick to this to avoid rushing later.
3. Make your answers look scientific, not just theoretical. Use flowcharts and diagrams wherever they add clarity.
4. Neatness matters — keep your handwriting clean, avoid cutting or overwriting.
5. Mind your spelling and grammar — while GSA doesn't deduct marks for these, your expression leaves an impression.
6. In the ability portion, explain analytical ability questions in words. For a 5-mark part, show all steps and provide clear explanations.

Good luck for CSS 2026 — you're going to ace it, in sha Allah! 🌟

b) Challenges:

- lack of human interference.
- Decline in job availibility.
- Can cause issues and faults in complex situations.
- Deepfake using AI is a moral challenge.
- Can exacerbate poverty.

b) Challenges:-

- Reduced role of doctor and nurses.
- Can cause death or harm in complex situations.
- Can reduce job opportunities in health sector.
- One wrong diagnosis can lead to complexities.

c) AI: Patient Care and medical diagnosis:

- Accuracy in dignosis of disease.
- Right treatment of the disease.
- Increase efficiency of medical sector
- Reduction of burden of patient on health care sector.

3

(b)

i) Bigbang Theory :-

1) Mass concentrated ~ Singularity :- Before Bigbang the mass of the universe was concentrated in a singularity.

2) Bigbang 13.8 billion years ago :- caused huge explosion.

3) Formation of planets:-

As a result stars, planets, asteriods, meteroids etc were formed. These bodies formed galaxies. For example, earth is located in 'Milky way' galaxy.

ii) Significance & evidance:-

1) Constant expansion of the universe:-

Most significant evidance, that suppoet this theory, is that the universe is expanding constantly. The volum of the universe is expanding every second.

2) Presence of Black holes:-

in the universe

also supports the concept of Big bang. These bodies have high gravitational field. Even light cannot escape through it.

3) Abundance of light elements:-

Like 'H' and 'He' produced in the early stage of Big bang. This stage was known as nucleosynthesis. This provides basis for the Big bang theory.

Understand that all parts are required to be addressed

(C)

a) Causes of Global Warming :-

Define global warming

i) Global Warming: The increase of average temperature of the earth's atmosphere "

Give natural causes as well

ii) Causes :-

•) Use of fossil fuels for energy generation :-

→ In Pakistan 60% energy is produced from thermal means.

•) Use of patrol and diesel in IC engines :

→ GHG are produced as a result. These damage the atmosphere by forming thick layer. As a result, heat is trapped. This is called green house effect.

• Agriculture practices :

→ Production of methane gas in agriculture sector and use of fertilizers cause global warming

iii) Effects :-

• Climate change :-

→ Average global temperature has risen 1.18°C pre industried levels.

- Floods:- In 2022 floods affected 33 million people in Pakistan.

- Economic losses:- Due to floods the losses were estimated at $30 billion in 2022 in Pakistan.

- Deaths:- last year 1500 hajis died due to global warming in Mecca.

- Poverty:- Before floods the poverty rate was 29% in Pakistan. Now it is 42%.

- Crop loss and Malnutrition:-
→ $12 billion losses in agriculture sector in 2022

floods:

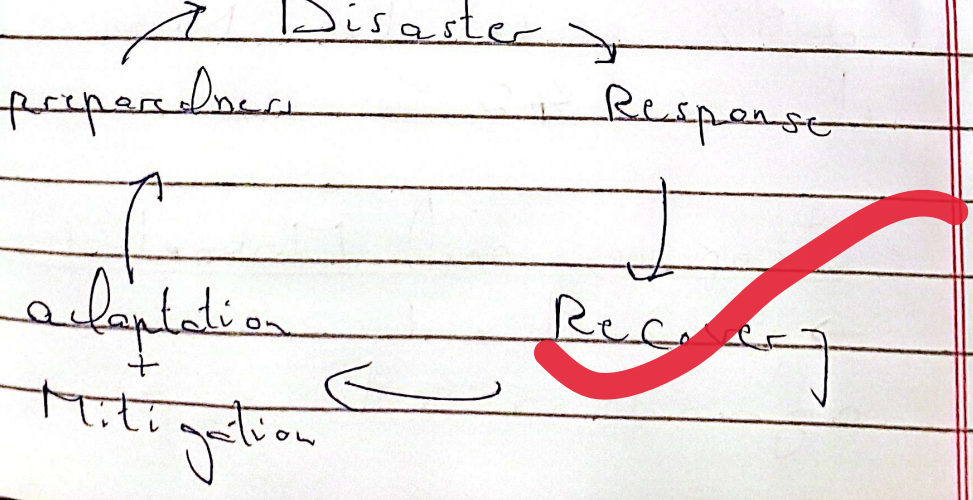
→ According to UN 10 million children are stunted in Pakistan.

iii) Way forward:-

- Use of electric cars.
- Construction of dams.
- Multilateral platforms to bring the global North accountable.
- Use of renewable energy.

(d)

Disaster Management Plan:-



i) Response:-
This is the first step of DMP. The authorities respond immediately to avoid potential harm to life.

ii) Recovery:-
This is the second step in DMP. The concerned people recover human and their assets from the disaster site.

iii) Mitigation and adaptation:-
This is the third step in DMP. The relevant staff is arrigned the task to secure the vulnerable area. This is done to avoid any disaster in the future.

iv) Preparedness:-

The fourth and the last step is preparedness. The disaster site is equiped with trained staff and equipment so that they can use these means in future to avoid harm.

c) Sucessful disaster management Strategies:-

1) Use of fire alarms
2) Use of sand in buckets for fire hazards
3) Use of fire extinguishers.
4) Automatic call forwarding to 911.
5) Use of fire exits.

Question #(04)

(a)

i) Tropical Cyclones:-

"These are a type of weather disturbance. They form on warm ocean waters. They are characterized by heavy precipitation and strong winds."

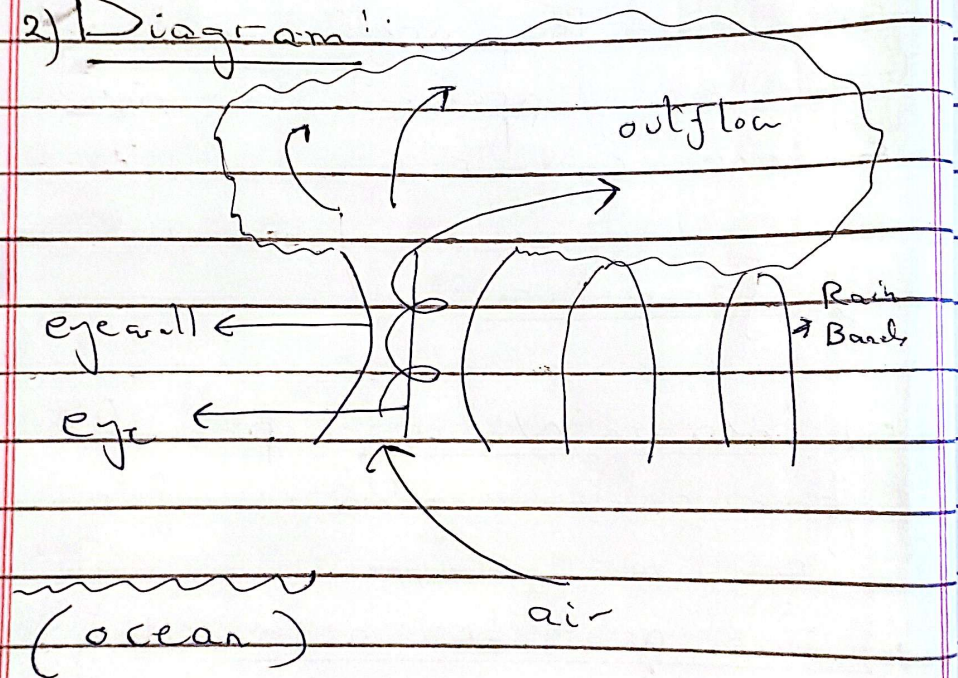
i) formation:-

-) Warm Waters:- provide favourable conditions for cyclones.
-) Sun heats the ocean:- by providing thermal energy.
-) heat transfer:- between the layer above the ocean water.
-) Rise of moist air:- due to less density.

- Disturbance between cold and warm air :- causes rotatory motion.

- Formation of tropical cyclone :- When moist air condenses.

2) Diagram :-



3) Characteristics :-

→ heavy rainfall
→ Increased humidity
→ fast moving air
→ Rotatory motion

4) factors:
→ Temperature of ocean
→ Ocean proximity
→ humidity.
→ Day or night time
→ Pressure

Explain points properly

5) Effect on Cortelare:
→ Infrastructure damage.
→ Threat to life
→ Economic Loss
→ Floods.
→ Poverty
→ Relocations

(b)

i) Remote Sensing:

= Observation of climate, weather or land through satellite without physical contact"

ii) How it is used in monitoring environment:

→ Monitoring clouds movement to predict the levels of precipitation.
→ Monitoring the level of GHG in the atmosphere
→ Monitoring potential climate change threats by glacier melting analysis
→ Monitoring sea level rise

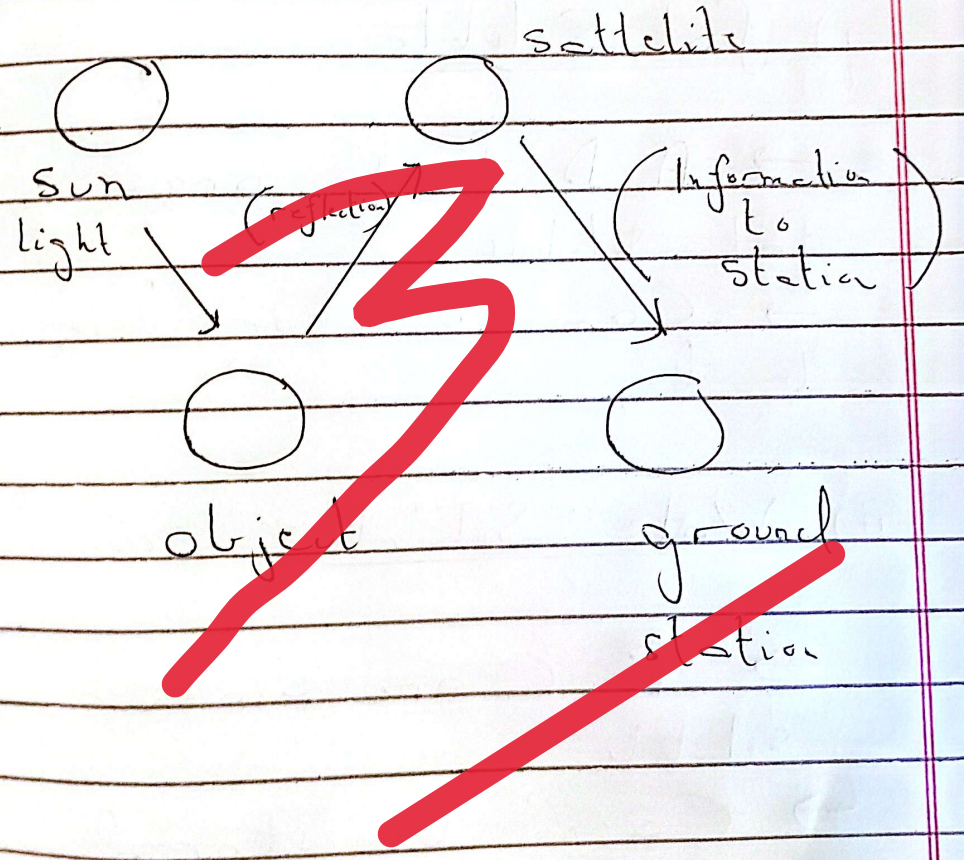
iii) Advantages:

→ Cheap to use
→ Provide spatial information
→ Easy to operate
→ Used in environment and land use management

(iv) Disadvantages:-

→ not 100% accurate
→ not clear when there are clouds.
→ In depth and close monitoring not possible

Diagram:-



(C)

i) Vitamins :-

Organic components use required in less amount for the human body."

Types :-

i) Fat Soluble :-

→ A, D, E, K are fat soluble
→ Can be stored in body.

ii) Water Soluble :-

→ B, C are water soluble
→ Cannot be stored

Contribution to health :-

Vitamins contribute to human health by providing essential nutrients that are required for a balanced diet.

2) Use in hair, Skin, eyes:-

→ Vitamin A used in maintaining skin and hair
→ Vitamin C is used to maintain healthy Immune system
→ Vitamin D used in Bones
→ Vitamin A used to improve vision

3) Deficiencies:-

Vitamin A → Vision Problem
B → Anemia
C → gum issues
D → damage to bones

(d)

a) Polio :-
Is a disease that affect children the most. It leads to paralysis. There is no cure for it.

b) How it spreads :-

i) Contact with infected feaces : results in the spread of Polio virus.

ii) Respiratory droplets :-
This is less common but can lead to infection

iii) Generational transmission :-
Transmitted from one generation to another

c) Global efforts :-

1) Vaccination drives all

around the world
ii) Polio testing units to detect the patients who are infected.
iii) Improving healthcare facilities and making it cheap so that the poor can also exploit these facilities.

d) Challenges:

a) Lack of education
b) Lack of parental consent
c) Terrorism against the polio staff

e) Importance of Vaccine:-

a) Prevent polio
b) healthy life style
c) Next generation saved
d) Ease in doing job
e) " " studing and contributing towards the society.

Q (7)

(a)

Given:-

$$5\%\,A + 4\%\,B = \frac{2}{3}\left(6\%\,A + 8\%\,B\right)$$

To find:

$$A : B$$

Solution:-

$$\frac{5}{20/100}A + \frac{4}{25/100}B = \frac{2}{3}\left(\frac{6}{100/50}A + \frac{8}{100/50}B\right)$$

$$\frac{1}{20}A + \frac{1}{25}B = \frac{2}{3}\left(\frac{3}{50}A + \frac{2}{25}B\right)$$

~~$20A + 25B$~~

$$\frac{A}{20} + \frac{B}{25} = \frac{36}{150}\frac{A}{75} + \frac{4}{75}B$$

$$\frac{A}{20} - \frac{3A}{25} = \frac{4}{75}B - \frac{B}{25}$$

$$\frac{5A - 4A}{100} = \frac{4B - 3B}{75}$$

$$\frac{A}{100} = \frac{B}{75}$$

$$\frac{A}{B} = \frac{1}{75} \times \frac{100}{3}$$

$$A : B = 4 : 3$$

(6)

Given:

digit = I + 10y

digit = x + 10x + 2

digit = 11x + 2

To find: number = ?

Sol :-

$(11x+2)(x+x+2) = 144$

$(11x+2)(2x+2) = 114$

$22x^2 + 22x + 4x + 4 = 114$

$22x^2 + 26x + 4 = 114$

$22x^2 + 26x - 110 = 0$

$11x^2 + 13x - 55 = 0$

$= \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

$= \frac{(-13) \pm \sqrt{(-13)^2 - 4(11)(55)}}{2(11)}$

=

790

(c)

Given:-

A : B : C : D = 5 : 2 : 4 : 3

To find: B's Share = ?

Solution:-

A's Share = $\frac{5}{(5+2+4+3)} \times C$

" = $\frac{5}{14} \times C$

Given

$\frac{4}{14} \times C = 1000 + \frac{3}{14} \times C$

$\frac{4}{14} \times C - \frac{3}{14} \times C = 1000$

$\frac{1}{14} \times C = 1000$

$C = 14,000$

B's = $\frac{2}{14} \times C = \frac{2}{14} \times 14000 = 2000$

(d)

Given:-

Father's age = 38 years

To find:

Son's age 5 years back = ?

Solution:-

Father was as old as his son at the time he was born.

So,

Son's age = $\frac{\text{Father age}}{2}$

$= \frac{38}{2}$

$= 19$ years

5 years back = 19 - 5 = 14 years

Question #06

(b)

Given:

$$x + y = 550$$

$$x = 120\% \, y$$

(To find)

$y = ?$

(Sol)

$$x = 1.2y$$

$$1.2y + y = 550$$

$$y = \frac{550}{2.2}$$

$$y = 250$$

(9)

(Given)

Tickets (1 - 20)

(To find)

Probability = ?

(Sol)

Multiple of 5 in tickets
= 4

Multiple of 3 in tickets
= 6

Total = 10

Probability = Desired outcome / Total

= 10/20 = 1/2 = 50%

9/20

(c)

(Given)

Perimeter : Breadth

5 : 1

Area = 216

(To find)

Length = ?

(Sol)

$xy = 216$ — (1)

$\frac{x+y}{4} = \frac{5}{1}$ — (2)

$x + y = 5y$

$x - 4y = 0$

$x = 4y$ (put in (1))

$4y^2 = 216$

$y^2 = \frac{216}{4}$

$y = \sqrt{\frac{216}{4}}$

Length = $x = 216 \div \sqrt{\frac{216}{4}}$

32.88 cm

X