

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! ✨

Define
GW

Primary Causes
Warning
Causes

Effects

- Earth is enveloped by layers of gases that now allows heat to release or escape at once it reaches from sun to earth.

- Rising temperature of the earth with the passage of time.

- These gases are called Greenhouse gases.

- Changing seasonal patterns such as 90% longer summer with release temperature.

- Melting of glaciers, CO₂, CH₄ etc.

- Water reservoirs and drying.

- Human activities are major contributors to rise the level of these gases.

- Fresh water content.

- Diseases outbreaks due to activities of the insects.

- Fossil fuel burning.

- Animal manure releases various in high temperature.

- Diseases outbreaks.

- Day _____
- Green house effect is an example of global warming.

Natural causes

- Agricultural production effect badly and disturb the sustainable supply of food chain.
- Famine, Droughts, floods etc are the effects of global warming.

Role of Human activities:

- (i) Burning of fossil fuels such as Coal, oil and gas.
- (ii) Vehicular emission such as SO_x , NO_x .
- (iii) Sub-standard Coal burning for power generation.
- (iv) Using extensive fertilizers emission of CH_4 from paddy rice field.

Potential Strategies for mitigating its impacts:

- (i) Use Renewable energy sources instead of extensive reliance on non-renewable energy sources.
- (ii) Use 3R Strategy to minimize

Organic or inorganic waste. Strategy of Recycle, Reuse, Re

Add more points

(iii) Bind the developed Countries (major polluters) into some Environmental Convention Agreement such as Montreal protocol, Paris Agreement, Kyoto protocol etc.

(iv) Raising awareness about the Sensitivity of matter among people especially in developing and under developed Countries.

(d) Key Components of Disaster management plan ---

“ A plan design to deal with the natural Hazardous activities or to minimize the impacts of natural disasters are called disaster management plan (DMP). ”

It Key Components

Pro active measures: Early preparedness in the Hazardous prone areas to minimize the impacts on Soil etc. (Resilient environment).

Active measures: Measures to deal during the disaster situation.

Recovery measures: Measures to re-start a life with normal activities are recovery measures after passing any disaster.

- Rebuild Buildings
- Early warning sys
- Access to affected areas
- Recover Communication System
- Collect data (life loss) at affected area
- provide all facilities again to begin life

= Some Key Components of disaster Management Plan

Importance the :-

preparedness, Response & Recovery

- | | | | |
|-------|--|--|---|
| (i) | It is a 1 st phase prior to face any disaster. | It is 2 nd phase during the disaster situation | It is the last phase after the damaging of disaster |
| (ii) | It makes a resistant city ready to face any challenge. | It makes to minimize the loss of life. | It makes to re-gain the strength to start life. |
| (iii) | It will help to minimize the impacts degree in upcoming situation. | It will help to reduce impacts by saving effected life or infra-structure. | It will help to recover from effected phase and ready for the next situation phase. |

You don't have to write everything in columns

Examples of Successful disaster management Strategies:

Japan make flexible building because it lies on fault line, an earthquake prone region. (pro active measures)

Early warning system in Sea shore region of America for rapid evacuation during Tsunamis.

(b)

Big Bang Theory:

A small structure with extreme temperature, burst almost 450 billion years ago and formed a universe. Consist of many galaxies with their own solar system.

Significance.

This theory explain how this universe was formed. Many precis Calculated theory (mathematical theories) failed to prove the origin of this universe. Some evidence also prove or supporting Big bang theory.

Initially when small structure burst, temperature was very high 3000°C

Then opposit type of elements were
formed called **electron & proton**
but some remains uncombined.
With time temperature were
reduce and suitable for these elements
to attract each other and form an atom.
this is how life begins.

Evidence:

Red and Blue Shift theory prove
the big bang theory. Because those
satellites that are far from our planet
are moving with high speed (similarly
higher speed of shorter Red wavelength)
and those that are near the planet are
slow in speed (Blue longer wavelength
with less speed).

(a)

Benefits and Challenges of AI

Benefits

- (i) To find the treatment
method of any disease.
Artificial intelligence assist
to present different
arrangement method of

Challenges

- It is not
easy to handle
AI because
a minor
human error

enzyme to prepare
medianes.
(ii) It helps during the
operation to find out
minute or precise detail
about the location of
affected body part.

(iii) It help to find solution
within short time period
instead of investing
year and year to
find a clear solution

of handling may
lead to generate
undesirable associated
results.

- The implication
of wrong results
of AI can cause
mass losses
worldwide

- For example
a wrong/faulty
vacuum can cause
deaths and injuries

AI on patient Case & medical diagnosis:

AI in medical field use for diagnosis
diseases. For example, It is difficult
to find out the problem Cancer-malignant
and Benign tumor. It assist to prescribed
the methods better for a patient during
the time period of treatment.

Q#4:

(b)

Remote Sensing :

It is a technique use to monitor the object without any physical connection with it (observation from some distance)

Usage in Environmental Monitoring :

Remote sensing applications in environment monitoring are :

- (i) Determine the seasonal impacts on crop production periodically.
- (ii) Determine the impact due to flood, earth quake, Tsunami, Tornadoes, Avalanches and many other disasters.
- (iii) RS help to monitor the ongoing climatic situation and warn for the up-coming changes. (Forecasting)
- (iv) It help to collect data during any disease outbreak.

Advantages & Disadvantages :

→ Changes in land use, vegetation and climate :

Managing the activities practices on land, such as (production) Construction of dams projects, power	It Can't predict all these activities how much give benefits in future
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projects and roads
Constructions etc.

RS help to monitor
Crops production on
land such as vegetation
cover expand over a
certain piece of land.

It help to monitor
temperature, precipitation
level, rain forecasting,
prediction about floods
etc.

or just go in waste
a patch of land.

It can't provide
you data in quantitative
form of output
of these crop
land.

It can only help
during precise handling
of data. Sometime
may error in data
spread wrong information.

For tracking changes in land
use vegetation and climate it
is mandatory it has synchronizing
movement with earth.



Satellite revolve around the earth.

(C)

Different Types of Vitamins:

There are different types of vitamins

Vitamin A

Vitamin B

Vitamin C

Vitamin K

Vitamin D

Vitamin E

All these are essential vitamins. Some are water soluble and some are fat soluble. It helps to maintain human health.

Vitamin in maintaining healthy skin, hair and eyes:

Vitamin A helps to maintain healthy eyesight.

Vitamin E, C, B help to maintain healthy skin.

Vitamin K helps for healthy hair.

Consequences of vitamin deficiencies:

Vitamins are essential part of our lives. Its deficiency may cause serious diseases or life-time disabilities.

Vitamin		impact of deficiency	Source
(i)	A	Night blindness, weak eyesight	Carrot
(ii)	D	Bone deformation, Rickets	Sun
(iii)	Essential	These are required either by food or through supplements	Fruits, vegetable, medicines
(iv)	Non-essential	These are produced by its own in our body. They all do in numbers	Human Body

(a)
poliomyelitis (polio): polio virus is transmitted through virus in blood. This virus suitable for warm temperature and in cold temperature, remains in dormant situation.

Global efforts:

This virus is completely eradicated from the whole world except few ones such as **Pakistan and Afghanistan** among them.

Pakistan made a lot of efforts to complete end this disease, yet compete with it. Different **Vaccine Campaigns** are continue in Pakistan. But due to illiteracy among people hamper these campaigns especially in **Balochistan and KPK**.

WHO (World Health Organization) announced its complete eradication at Global level.

Importance of Vaccination:

Vaccination is a process to boost the immune system and prepare body

for any external bacterial or viral attack

Vaccination is preventing people also having any significance.

(i) It stimulates the body to start preparing antibodies against antigens (polio virus)

(ii) Dominant polio virus injected in the body (it is unable to harm the body) But immune system became stimulated and accumulated antibodies.

(iii) If a real healthy virus entered in body, it could be unable to spread any disease because already immune body kill this virus easily.

(a)

Characteristics of tropical cyclones

- Cyclones are the circular movement of water in seas and oceans with high intensity.
- When the pressure of air high, its intensity will also increase.
- It affects the coastal areas by

damaging infrastructure, buildings,
and territories. Current damage is form
of life loss.

Q# of Part II (B)

A, B, C, D in proportion of
 $5:2:4:3$

Share of C = 1×1000

Share of B = ?

→ Share of C $\Rightarrow 3 \times 1000$

$5 + 2 + 4 + 3 = 14$

$5 + 2 + 4 + 3 = 14$

Total = 1000

C = $4/1000 = 250 \$$

B = $2/1000 = 500 \$$