

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.

Here's a brief key/sample of your Ability questions

Q.6 (B) OR = 200
a) Candy ratio problem
Given: Packets in flavors Apple : Berry : Cherry : Date = 3 : 6 : 2 : 5.
Asked: If Apple candies exceed Date candies by 35, how many Berry candies are there?

Note (consistency check): The ratio shows Apple = 3 parts and Date = 5 parts, so Date is larger than Apple in the ratio. The statement "Apple candies exceed Date candies by 35" contradicts the ratio (Apple cannot exceed Date if ratio is 3:5). Two ways to handle this:

- Apply 6% sales tax on discounted
1. If the problem truly intends Apple - Date = 35, that's impossible with the given ratio (would require negative common factor).

2. Most likely the intended meaning is Date exceeds Apple by 35 (i.e. Date - Apple = 35). I will solve that reasonable interpretation.

Give data

Distance = 36 km

Speed = 18 km/h

Starting time = 1:00pm

$$\text{Time} = \frac{\text{Distance}}{\text{Speed}}$$

$$\text{Time} = \frac{36}{18} = 2 \text{ hours}$$

$$2 + 1:00\text{pm} = \boxed{3\text{pm}} \text{ Ans.}$$

(D)

1. STATISTICS

2. ALGEBRA

(A)

Formula

$$V = \frac{4}{3} \pi r^3$$

Diameter = 14cm

$$\text{So radius } r = \frac{14}{2} = 7 \text{ cm}$$

$$\pi = \frac{22}{7}$$

$$V = \frac{4}{3} \times \frac{22}{7} \times 7^3$$

$$7^3 = 7 \times 7 \times 7 = 343$$

$$V = \frac{4}{3} \times \frac{22}{7} \times 343$$

$$343 \div 7 = 49$$

$$V = \frac{4}{3} \times 22 \times 49$$

$$\frac{4}{3} \times 1078$$

$$V \frac{4312}{3} = 1437.33 \text{ Ans.}$$

(B)

$$1:2:3:4:5$$

$$\frac{25000}{18} = 1666.66$$

$$1 \times 1666.66 = \boxed{1666.66} \text{ Ans.}$$

(C)

i $2 \times 3 = 6$

$$6 \times 3 = 18$$

$$18 \times 3 = 54$$

$$54 \times 3 = 162$$

$$162 \times 3 = \boxed{486} \text{ Ans}$$

(No error $\Rightarrow$ all numbers fit.)

ii)

$$3 \quad 5 \quad 7 \quad 11 \quad 13 \quad \boxed{17} \text{ Ans}$$

All divide by 1 and themselves.

(D)

Plz Pythagoras theorem

$$a^2 + b^2 = c^2$$

$$5^2 + 12^2 = 13^2$$

$$25 + 144 = 169$$

Q:8 (A)

$$\sqrt{7^2 + 24^2}$$

$$\sqrt{49 + 576}$$

$$\sqrt{625} = 25 \text{ km}$$

$$7 + 24 + 25 = 56 \text{ km}$$

He then walk 10km straight, then turn 90°
and walk 5k so extra distance = $10 + 5 = 15$

$$56 + 15 = \boxed{71} \text{ Ans.}$$

Distance from the star

$$\sqrt{10^2 + 5^2} = \sqrt{100 + 25} = \sqrt{125} \text{ Ans.}$$

(B)

1. A gets half of B
2. B gets 3 times C
3. C gets 4 times D
4. D gets 2 times E
5. $E = F$

$$\text{Then } E = F = 1$$

$$D = 2 \times E = 2 \times 1 = 2 \text{ units}$$

$$C = 4 \times D = 4 \times 2 = 8 \text{ units}$$

$$B = 3 \times C = 3 \times 8 = 24 \text{ units}$$

$$A = \frac{1}{2} \times B = \frac{1}{2} \times 24 = 12 \text{ units}$$

$$A = 12, B = 24, C = 8, D = 2, E = 1$$
$$F = 1$$

Total units

$$12 + 24 + 8 + 2 + 1 + 1 = 48 \text{ units}$$

$$9000 \div 48 = 187.5$$

$$A = 12 \times 187.5 = 2250$$

$$B = 24 \times 187.5 = 4500$$

$$C = 8 \times 187.5 = 1500$$

$$D = 2 \times 187.5 = 375$$

$$E = 1 \times 187.5 = 187.5$$

$$F = 1 \times 187.5 = 187.5$$

(C)

$$\text{Length } l = 8\text{m}$$

$$\text{Width } w = 6\text{m}$$

$$\text{Height } h = 4\text{m}$$

$$\text{from Formula } TSA = 2(lw + lh + wh)$$

$$2(8 \times 6 + 8 \times 4 + 6 \times 4)$$

$$2(48 + 32 + 24) = 104$$

$$2(104) = \boxed{208\text{m}^2}$$

Total surface area is 208m^2

$$\text{Volume} = l \times w \times h$$

$$8 \times 6 \times 4$$

$$8 \times 6 = 48$$

$$48 \times 4 = \boxed{192} \text{ Ans.}$$

Total Volume 192 Ans.

(D) (Part)

Data

Total family member = 8

Men 4 = Women 4

Average food consumption

Men = 72 kg

Women = 50 kg

Amna eat 67 kg

$4 \times 72 = 288$ kg Men's total consumption

$4 \times 50 = 200$ kg Women total consumption

Total food $288 + 200 = 488$ kg

Total members $= 8 + 1 = 9$

New average = 67 kg

$67 \times 9 = 603$ kg

Amna's food = Total with Amna - Org

Amna's food $603 - 488 = 115$ kg.

Answer 115 kg

(Q:3) (PART A)

Pakistan is the fifth most populous country of the world. Currently Pakistan population has reached on 24 million. It is highly ~~an~~ alarming situation. The population explosion is caused by several factors:

Causes:

- Early marriages: Many ~~girls~~ girls are married at young age, which increases the number of childbearing years.
- Lack of education: Uneducated people are often unaware of family planning methods.
- Limited use of Contraceptives: Religious misconceptions and social taboos prevents the proper use of birth control.
- Traditional norms and values: Having many children, especially sons, is often considered a social honor.
- Preference for male children - Families continue to have children in the hope of having a boy, leading higher birth rates.

Control Measures:

1. Awareness Campaigns: Educate people about family planning and the benefits of smaller families.
2. Religious Consultation → work with religious scholars to clarify misconceptions about contraceptives.
3. Education - Promote female education and empower people to make informed family planning decisions.
4. Government policies: Implement incentives and policies that encourage families to limit the number of children.

(B)

Remote Sensing is a technique used to collect information about the Earth surface without direct contact. It uses satellites, drones, or aircraft to monitor environmental conditions such as land use, deforestation, temperature, and pollution levels. It helps scientists observe environmental changes over time.

Role of GIS

Role of GIS in Environmental Science

1. Mapping and Monitoring: GIS (Geographic Information System) helps in mapping land, forests, and water bodies to track environmental changes.
2. Disaster Management: It assists in predicting and managing natural disasters like floods, drought, and earthquakes.

3. Climate Change Analysis: GIS help track Climate patterns and temperature Variations across different regions.

• Resource Management: It supports sustainable management of natural resources like soil, water, and forests.

Urban Planning: GIS helps in planning eco-friendly Urban development and reducing pollution.

Conclusion:

Both remote Sensing and GIS play a vital role in environment Science by providing accurate data and visual tools to monitor, manage, and protect the Earth's environment.

1. The atmosphere acts as a protective blanket around the Earth.
2. It regulates temperature and keeps the planet warm enough to support life.
3. The ozone layer shields ~~and~~ living organisms from harmful solar radiation.
4. It controls weather and climate patterns, ~~maintaining~~ maintaining ecological balance.
5. Pollution from industries, vehicles, plastics, and pesticides harms the atmosphere.
6. Climate change caused by pollution leads to floods, drought, and irregular rainfall.
7. A clean atmosphere ensures food security, health, and a stable environment.
8. Damage to the atmosphere ~~threatens~~ threatens all forms of life on Earth.

Opinion:

In my opinion, the atmosphere truly functions as Earth's protective blanket because it maintains life-supporting conditions and safeguards the planet from ~~extreme~~ extreme climatic and

environmental changes. Preserving it is essential for human survival and sustainable development.

(D) (PART)

Hydrometer:

A hydrometer is an instrument used to measure the relative density or specific gravity of liquids. It helps determine how heavy or light a liquid is compared to water.



Epicenter:

The Epicenter is the point on the Earth's surface that lies directly above the focus (origin) of an earthquake. It is the location where the strongest shaking is usually felt.



(iii) Eye wall of Cyclone:

The eye wall is the dense ring of clouds surrounding the calm center (eye) of a cyclone. It contains the most intense winds, heavy rainfall and ~~severe~~ severe weather conditions.

(iv) Light year:

A light year is the distance that light travels in one year in a vacuum. It equals about 9.46 trillion kilometers (5.88 trillion miles) and is used to measure astronomical distances.

v) Deep focus:

A deep focus refers to the point inside the Earth where ~~can~~ an ~~eq~~ earthquake originates at a depth of more than 300 kilometers below the surface. Such earthquakes are usually less damaging on the surface.