

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:

Section-I

Q: No 2

as "Data is the new oil."

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.
Yes, I agree with the statement "Data is the new oil". Today's world's data has become the most valuable resources — just as oil powers the industrial world. Every company uses data to take the digital era.
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.
and online activity generates algorithm that companies use to take
5. Mind your spelling and grammar — while GSA doesn't deduct marks for these, your expression leaves an impression.
shopper glances regarding to spend and then earn profits.

Examples:

6. In the ability portion, explain analytical ability questions in words. For a 5-mark part, show all steps and provide clear explanations.

Online Shopping:-
When we buy products or something on Daraz and Amazon, these

Here's a brief key/sample of your Ability questions
companies collect data about what

Q.6
we search, purchase or even just

a) Candy ratio problem

Given: Packets in flavors Apple : Berry : Cherry : Date = 3 : 6 : 2 : 5.
browser. This data is then analyzed to recommend similar products,

Asked: If Apple candies exceed Date candies by 35, how many Berry candies are there?
show personalized ads, and manage stocks

Note (consistency check): The ratio shows Apple $\frac{3}{8}$ parts

2- Social Media platforms:

Apps like Facebook, TikTok, Instagrams etc generate data not in its algorithm which later on used by them to produce personalized videos according to our interest. For instance, if we watch videos on cooking, then after a while we start receiving the data, ads or videos regarding the cooking.

3- Maps and Navigation:

When we use Google Maps or similar app, our location data helps predict traffic, suggest faster routes and improve navigation accuracy. The app use real-time data to show which roads are busy or clear.

In the conclusion, data has become a key resource shaping modern economies and daily life. It drives business growth, improves technology and enhance convenience.

b) Universe is expanding---

The expanding universe can be compared to a balloon being blown up - it helps us visualize how space itself stretches.

Here's how the resemblance works:

→ Imagine to draw tiny dots on a balloon to represent galaxies.

→ When the balloon is blown up, the surface of the balloon expands, and the dots move farther apart from each other.

→ The dots themselves do not move on the balloon surface, instead the space between them is far apart.

In the same way, in the universe,

galaxies are not flying away through space, rather space

itself is expanding and this expansion increases the distance between galaxies.

In short, the expanding balloon helps us to understand that the universe is growing as space stretches, carrying galaxies along with.

(c) Balanced Diet:

"A balanced diet is the diet that includes the right amount of nutrients such as proteins, fats, minerals, carbohydrates etc for proper growth, work and development, and normal functioning of the body. It depends upon the age, height, gender and occupation. So, it is not same for all.

⇒ Example: A young man of 15 requires more calories than an elder man that do nothing.

⇒ Similarly, A mother who is lactating requires more proteinaceous diet than the married one.

Vitamins :

"There are organic compounds that are essential for the growth of the body." Vitamins needed in a small amount to trigger thousands of reactions in our body, to maintain good health. If any of the essential vitamin is missing in the body they could cause devastating health effects.

Deficiency of A, D and E.

⇒ Vitamin A (carotinoides)

Vitamin A found in Fish, liver, oil carrot etc. Its deficiency causes Night blindness, dryness of skin.

⇒ Vitamin D (Sunshine vitamin)

Found in butter, milk, cheese →
Deficiency causes rickets.

⇒ Vitamin E (Tocopherol)

Found in butter, meats, sunflower
Deficiency causes sterility.

d) Working of GPS:

Global positioning system is a satellite-based navigation system made up of a network of 24 satellites placed into orbits.

→ GPS satellite orbits the earth twice a day in a way precise orbit and transmit the signal to the earth. GPS receivers take this information and use triangulation to track the exact location of user. They compare the time a signal was transmitted by the satellite to the time it was received. The time difference tells the how far satellite is. With this difference, tracker can locate the exact user's position and display it on the unit's electronic map.

A GPS receiver must be locked onto the signal of at least three satellites.

Find 2D position (latitude and longitude).
With four or more satellites in
view receiver can determine the
user's 3D position (longitude, latitude
and altitude). Once the user's
position has been determined,
the GPS unit can calculate
the other information such as
speed, bearing, track.

Question 3:-

a) Why cells form organelles?

Cells form organelles to make
their work more efficient and
organized. Each organelle has a
special job just like departments
in a factory. Each organelle performs
a special function. Example, [Mitochondria]
produce energy, [Nucleus] control
activities.

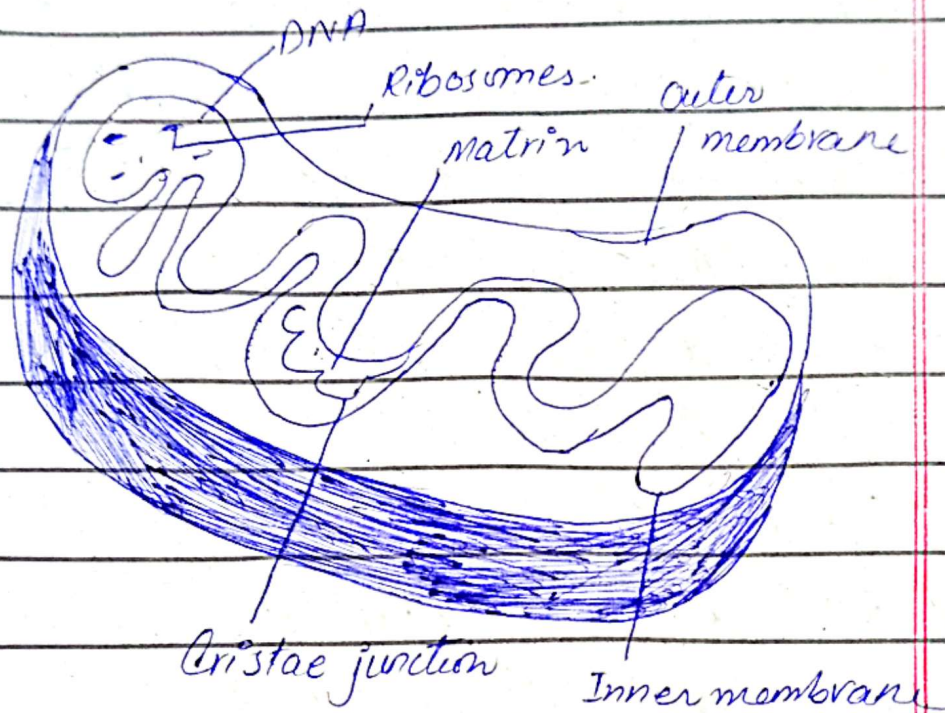
=> Why cells form organelles?

=> Division of labour

1) Efficiency

- 1) Protection and control
- 2) Adaptation and survival.

Mitochondria:



⇒ They are called the power house of cells. Their number is different in different cells, depending upon the nature. They have two membranes.

- i) Outer membrane
- ii) Inner membrane — forms finger like folding called **cristae**.
Inside it present a liquid

material called Matrix. They have their own DNA. They are self-replicating bodies. They synthesize ATP which is used to provide energy in cell.

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b) Doping:

"The process in which impurities are added into the semi-conductors to boost up their conducting properties is called doping."

Types of Semiconductors:

⇒ N-type semi-conductor

⇒ P-type semi-conductor

N-type Semiconductor:

That are formed due to result of pentavalent electron donor impurities like arsenic and antimony in the silicon and germanium.

P-type semiconductor

⇒ Impurities of trivalent electron

deficient like boron and indium
in the silicon and germanium.

←————→
d) What is Dengue?

- ⇒ Mosquito borne disease
- ⇒ Transmitted by genus Aedes,
A. aegypti
- ⇒ Endemic disease in more than 100
to countries throughout Africa, America,
South East Asia and Western Pacific.

Symptoms:

- ⇒ Sudden high fever
- ⇒ Severe headache
- ⇒ Pain behind the eyes
- ⇒ Fatigue, Nausea, Vomiting
- ⇒ Severe joint and muscle pain

Remedies:

- ⇒ Stay away from heavily populated
areas.
- ⇒ Use mosquito repellents.
- ⇒ Wear long shirts, full sleeve
- ⇒ Make sure windows and door screens
are secure and free of holes.