

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

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:

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.

Formula: Let common factor = k . Apple = $3k$, Date = $5k$.

So $5k - 3k = 35 \Rightarrow 2k = 35$.

Solution: $2k = 35 \Rightarrow k = 35 \div 2 = 17.5$.

Berry = $6k = 6 \times 17.5 = 105$.

Answer: 105 Berry candies.

(If you intended the other wording exactly as written, note that it is inconsistent with the ratio.)

b) Camera discount + tax

Given: Original price = \$200. Discount = 25% off. After discount, 6% tax applied.

Asked: Total amount paid.

Formula / Steps:

Discount amount = 25% of 200 = 0.25×200 .

Sale price = 200 - discount.

Tax = 6% of sale price.

Total = sale price + tax.

Solution (digit by digit):

Discount = $200 \times 0.25 = 50$.

Sale price = $200 - 50 = 150$.

Tax = $150 \times 0.06 = 9$.

Total paid = $150 + 9 = 159$.

Answer: \$159.00

c) Bicycle travel time

Given: Distance = 36 km, speed = 18 km/hr, start time = 1:00 PM.

Asked: Arrival time.

Formula: Time = Distance $\div$ Speed

Solution: Time = $36 \div 18 = 2$ hours. Start 1:00 PM + 2 hours = 3:00 PM.

Answer: 3:00 PM

d) Unscramble math terms

i. STATISTICS

ii. GAMBLER

Q7.

Given:

- Diameter (d) = 14 cm

- Radius (r) = $d/2 = 14/2 = 7$ cm

- $\pi = 22/7$

Asked: volume of sphere

Formula:

Volume = $(4/3)\pi r^3$

Now, let's plug in the values:

Volume = $(4/3) \times (22/7) \times (7)^3$

= $(4/3) \times 22 \times 7 \times 7$

= 1437.33 cm^3

Answer:

The volume of the sphere is approximately 1437.33 cm^3

(b) Five friends' savings (total Rs. 25,000; ratio 1:2:3:4:5)

Given: Total = Rs. 25,000. Ratio = 1 : 2 : 3 : 4 : 5.

Asked: Smallest share (the "1" part).

Formula: Sum of ratio parts = $1+2+3+4+5 = 15$. Smallest = $(1/15) \times \text{total}$

Day: _____ Date: _____

Example 1: Youtube company. Whatever one sees, skips or repeat becomes ^{one's} part of profile on Youtube. Youtube takes the raw data, refined it and starts showing their ^{one's} personalized playlist.

Example 2: In vaccine distribution, authorities use population, age and health data to prioritize who gets vaccinated.

Example 3: In weather forecasting, satellites collect images, weather station ~~tracks~~ tracks wind speed, humidity, etc. and ocean buoys send sea temperature and storm data to accurately predict weather.

(ii) Universe is expanding. How it resembles to balloon?

The universe has been expanding since the Big Bang. Galaxies are moving farther apart from one another, and this expansion is accelerating, a phenomenon likely caused by mysterious force 'dark energy'.

Using balloon analogy to understand this expansion because they both resembles

amino acids, ...

each other. For instance, Imagine a balloon with dots on it. Balloon is universe and dots are galaxies. When it inflates dots (galaxies) moves away from each other. But the dots (galaxies) themselves aren't moving — it is the surface of balloon (space) which is expanding.

(iii) Balanced diet:

Balanced diet is a diet that involves/contains food from the 5 food groups; fruits, vegetables, dairy, grains and proteins, in the correct amount to fulfills all of a person's nutritional needs.

Deficiency of vitamin A

Deficiency of vitamin A causes night blindness, weakened immunity, delayed growth & bone development in children, infertility and miscarriage and anaemia.

Deficiency of vitamin D

Vitamin D deficiency can lead to a loss of bone density, which can

contribute to osteoporosis and fractures.
In children, it can cause Rickets.

Deficiency of Vitamin E

It can cause nerve and muscle damage, leading to symptoms like muscle weakness, poor coordination, difficult walking, vision problems, immune system impairment, dementia and cardiac arrhythmias.

(iv) Working of GPS

GPS is a network of satellites that transmit signals to GPS receivers, allowing them to determine precise geographic location and movement.

Fiber Optic:

A technology that transmits data as pulses of light through thin strands of glass or plastic is called Fiber Optics.

How 2D and 3D locations are measured?

Satellites measure 2D and 3D locations using trilateration, a process that calculates position based on distance from multiple satellites.

(i) Chlorophyll

It is the green pigment essential for photosynthesis in the plant kingdom, allowing plants to convert light energy into chemical energy by absorbing red and blue light and reflecting green light. It is the key molecule for energy production in most plants, algae and cyanobacteria.

(ii) Role of Ribosomes in Protein synthesis

Ribosomes act as the cell's 'factories' for protein synthesis, reading the genetic instructions from messenger RNA and using them to assemble a specific sequence of amino acids into a new protein. They achieve this by binding to the mRNA, allowing transfer RNA (tRNA) molecules, which carry specific amino acids, to bind the corresponding

genetic code on the mRNA.

(iii) Different methods of Solid Waste Management

Methods of solid waste management includes landfilling, reduction, recycle^{and} reuse.

Producing less waste in the first place to prevent it from becoming solid waste is Reduction.

using products multiple times for their original purpose or for a new one such as repairing is reuse.

Collecting waste minerals and processing them to be manufactured into new products is recycling.