

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 clear, 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: $2k = 35 \Rightarrow k = 17.5$

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 = $25\% \text{ of } 200 = 0.25 \times 200$.

Sale price = $200 - \text{discount}$.

Tax = $6\% \text{ of sale price}$.

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 ÷ Speed.

Solution: Time = $36 \div 18 = 2 \text{ hours}$. 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) = $d/2 = 14/2 = 7 \text{ cm}$

- $\pi = 22/7$

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 = $(1/15) \times \text{total}$

Part II

Question no: 2

Answer:

The analogy of data with oil is very interesting. As oil is very precious and the economies of whole world is dependent on it. Data is getting significant day by day in this era of technology. Google, Facebook runs on data. Mncs choose their new country on the basis of data of previous consumer behaviour of that region.

1> Digital economies:-

Digital economies run on data. Banks accounts are designed on the basis of the data provided by the person.

1> Artificial intelligence:-

AI is seeping into every aspect of human life. It act like a human intellect based on data entered into it by humans.

1> Crime investigation:-

Data has made investigations of (light) crimes more easier. On the basis of finger points on crime scenes the data

of the accused can be taken out from national database centres.

So, the data has really become the new oil as the world world is dependent on it.

b: Expansion of universe and its resemblance with ^{blowing} balloon:-

Evidence shows that universe is not static and ~~and~~ ^{is} constantly expanding. The longer and redder wavelengths of distant stars moving away from earth indicates that universe is expanding.

1) when hydrogen and helium gas^s are filled into a balloon it starts rising and expanding. Same like universe, the particles of dust and gas expanding into the universe space.

c: Balanced diet:-

A balanced diet is ^{the} one that includes all the nutrients and vitamins ~~th~~ needed for a human body to remain healthy and function properly. ~~The~~ balance diet contains proteins, carbohydrates in balanced amount. Sources of protein are chicken, eggs, chickpeas and lentils. Sources of carbohydrates are (sugar, starch) wheat, rice, green vegetables etc.

Deficiencies of vitamins:-

DAY: _____

DATE: _____

A:-

Deficiency of vitamin A can cause RBCs deficiency which is important for carrying oxygen in the body through blood, Heart diseases and lung diseases.

D:-

Deficiency of vitamin D can cause level of cortisol hormone to rise which leads to anxiety and depression. Deficiency of vitamin D can also cause muscle weakness.

d.1 GPS:-

GPS stands for global positioning system. It is used to trace out the location of a place or person through the coordinates of latitude and longitude. GPS is mostly used in vehicles to guide through the accurate location.

d.2 Fiber optics:-

Fiber optic is a tube made up of glass that is used to carry signals in the form of light, contrary to the copper wires that carry signals through electricity. Fiber optic is enclosed into several coverings to protect it from breaking. Fiber optics are mostly placed in oceans and seas to carry internet throughout the globe.

d.3 Measurement of 3D and 2D locations by satellite:- Artificial satellites are man

DAY: _____

DATE: _____

made and revolve around the earth to monitor different locations of earth. Some are weather satellites that help predict the weather patterns. It produces 2D and 3D pictures of location. The measurement of locations is based on the precision of resolution of satellite.

Question no: 5

- a) Pakistan is the fifth most populous country in the world. According to the report of world Bank, population of Pakistan exceeds 240 million. This population explosion has given rise to multitude of problems such as unemployment, urbanization on heavy scale, pollution and food scarcity.

causes of overpopulation in Pakistan:-

i) Lack of awareness:-

There is lack of awareness among the poor and uneducated segment of the country. They are not aware about the consequences of huge population (scarcity of resources). Mostly people are not literate with regards to family planning which results in unexpected pregnancies.

DAY: _____

DATE: _____

religious misinterpretation:-

Pakistan is an Islamic country and most of the cultural norms are based on Islam. Some scholars have declared family planning to be an act of sin in Islam. But, Islam advocates for responsible family planning. Due to the mentioned reason above, most women in Pakistan do not use birth control pills.

cultural phenomena:-

The people of subcontinent are culturally known to produce more children. This process is still going on.

Control Measures:-

↳ Spreading awareness among masses:-

Government should organize nationwide campaign to spread awareness among people about the consequence of overpopulation.

↳ Education about family planning:-

Women should be educated about family planning. They should be educated about birth control practices.

↳ Easy access to Birth control:-

Health workers should

distribute birth control pills among women. This campaign can also be integrated in Benazir income support programme.

Incentives:

(Government should introduce incentives for small families. It would inspire others to not expand their family in order to benefit from those incentives.

c: Atmosphere as Blanket of earth:

Allah has created atmosphere as a natural blanket of earth that protects it from all the harmful radiations emitted by sun. The ^{ozone} layer protects earth from the harmful radiations such as ultraviolet radiations. The ozone layer is made up of O_3 . Without ozone layer, life would not have been possible on earth.

In addition to this, all the five layers of atmosphere filters out the excess heat before reaching to earth.

d) d.1 Hydrometer:

Hydrometer is an instrument that is used to check the quality of water.

d.2 Epicenter:

Epicenter is the main point of an event. For instance, when we talk about the epicenter.

DAY: _____

DATE: _____

ntse of earth quake, it means that the tec-
tonic plates have collided on a point
and then the seismic waves ~~have~~ spread to
the surroundings.

Light year:

light year is an amount of time
when ~~found~~ travels in the air light waves
in space.

SECTION-II

d: Unscramble these math terms:

i) BTSTACITS

Statistics

