

Section - II

Question 5:

Students below 8 years of age = 20%
 above 8 years of age = 80%
 8 years of age = 18

Total students = x

Total students = x

x

=

$$48 + 32 + \frac{20x}{100}$$

x

=

$$80 + \frac{20x}{100}$$

x

=

$$\frac{8000 + 20x}{100}$$

$$100x = 8000 + 20x$$

$$100x - 20x = 8000$$

$$80x = 8000$$

x

=

$$\frac{8000}{80}$$

$x = 100$

Hence,

The total number of students in school is 100

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! 🌟

b). Rashid age = x
Father's age = $3x$

After 8 years;

$$3x + 8 = 2.5x$$

$$3x + 8 = \frac{25x}{10}$$

$$3x - \frac{25x}{10} = -8$$

$$\frac{30x - 25x}{10} = -8$$

$$30x - 25x = 80$$

$$5x = 80$$

$$x = \frac{80}{5}$$

$$x = 16$$

Rashid will be 16 years old after 8 years

Rashid's Father will be 40 years

After further 8 years

Rashid will be 24 years

Rashid's Father's age will be 48 years

Since, 48 is the twice of 24.

Hence,

Rashid's Father will be twice of his age after further 8 years

Answer = Twice of Rashid's age

C) Two dice are tossed:

Each dice has possibility of outcome 6

The total possible outcomes = $6 \times 6 = 36$

Prime number's possibility:

• Following Prime numbers could be possible
from 2 to 12 = 2, 3, 5, 7, 11

a) $2 = (1+1) \Rightarrow$ 1 possibility

$3 = (1+2) (2,1) =$ 2 possibilities

$5 = (1,4) (2,3) (4,1) (3,2) =$ 4 possibilities

$7 = (1,6) (6,1) (2,5) (5,2) (3,4) (4,3)$
 $=$ 6 possibilities

$11 = (5,6) (6,5) =$ 2 possibilities

Total possible outcomes as prime numbers

$1 + 2 + 4 + 6 + 2 \Rightarrow 15$

Hence,

probability = $\frac{15}{36}$

probability = $\frac{5}{12}$

D) Captain = 26 Years old

wicket keeper = 29 years old

• Average Age of total players = x

Total age of the team = $11x$

• Average age of remaining players = $x - 1$

Total age of remaining players = $9(x - 1)$
 $= 9x - 9$

Total age of team = Avg age of 9 players +
Captain + wicketkeeper

$$11x = (9x - 9) + 55$$

$$11x - 9x = 55 - 9$$

$$2x = 46$$

$$2x = 46$$

$$x = \frac{46}{2}$$

$$x = 23$$

The average age of the whole team
is 23 years.

Question no # 6

a) If selling price is doubled, profit is tripled

Assume the cost price is 100

original selling price = x

Profit = $x - 100$

• According to the given condition;

selling price = $2x$

New profit = $3(x - 100)$

New profit = New SP - CP

$$3(x - 100) = 2x - 100$$

$$3x - 300 = 2x - 100$$

$$3x - 2x = -100 + 300$$

$$x = 200$$

• Original selling price = 200

$$\text{Original profit} = 200 - 100$$

$$= 100$$

$$\text{Profit percentage} = \frac{100}{100} \times 100$$

$$= 100$$

• If selling price is double, profit is tripled;

$$\text{new selling price} - \text{CP} = 400 - 100$$

$$= 300$$

$$\text{Profit\%} = \frac{300}{100} \times 100$$

$$\boxed{\text{Profit\%} = 300\%}$$

- b) Total pay of X and Y = 550
 pay of X = 120% of Y
 pay of Y = x

$$\text{Total payment} = \text{pay of X} + \text{pay of Y}$$

$$550 = 120\% \text{ of } x + x$$

$$550 = \frac{120x}{100} + \frac{x \times 100}{100}$$

$$550 = \frac{120x + 100x}{100}$$

$$550 = \frac{220x}{100}$$

$$220x = 550 \times 100$$

$$x = \frac{55000}{220} \Rightarrow \frac{500}{2}$$

$$\boxed{x = 250}$$

Pay of Y per week is Rs 250

C) Ratio between the perimeter and the breadth of a rectangle = 5 : 1

Area of the rectangle = 216 sq. cm

Length of the rectangle = ~~x~~ L
breadth = x

$$\text{Perimeter} = 2(L + x) = 5x$$

$$2L + 2x = 5x$$

$$L = \frac{5x - 2x}{2}$$

$$L = \frac{3x}{2}$$

Area of rectangle = L x B

$$216 = \frac{3x}{2} \times x$$

$$216 \times 2 = 3x^2$$

$$432 = 3x^2$$

$$x^2 = \frac{432}{3}$$

$$\sqrt{x^2} = \sqrt{144}$$

$$x = 12$$

Breadth of rectangle = 12

$$\text{Length} = \frac{3x}{2}$$

$$= \frac{3(12)}{2}$$

$$\text{Length} = 18$$

D)

Multiples of 3 = 3, 6, 9, 12, 15, 18

Multiples of 5 = 5, 10, 15, 20

Total no. of multiples = 3, 6, 9, 12, 15, 18, 20
= 9

Probability of drawing the ticket that has a number which is a multiple of 3 or 5 is

$$\text{Probability} = \frac{9}{20}$$

Section - I

Question no # 4

d) poliomyelitis (Polio)

Poliomyelitis, the word is derived from the Greek language. polio means 'gray matter' myelitis means 'spinal cord' inflammation.

Definition;

"Poliomyelitis is highly infectious viral disease, which lead to the paralysis of different part of body"

It is more common in children and young adults. Causative agent for this condition is 'poliovirus'.

Types of poliovirus

- Brunhilde poliovirus
- Lansing poliovirus
- Leon poliovirus.

Transmission:-

- Poliovirus is usually spread through contaminated food or water.
- It is also transmitted through faeces, especially while changing the baby diapers it can easily be transmitted to the mother's hand. If hands are not washed properly it can further contaminate the food or the water.
- Transmission in the body is via mouth to the upper respiratory tract, then passing through gastrointestinal tract where it multiplies in the small intestine. Via small intestine it can be passed along with faeces, where the cycle of the transmission continues or it transmits to the lymphatic system.

Global efforts to eradicate polio

Global efforts: major global efforts have been done to eradicate this highly infectious viral disease. Vaccination drives have been of great help in eradicating virus. Cases of poliovirus are decreased by 99%.

globally. In 2015, cases of poliovirus reduced from 350,000 cases to only 74 cases.

Challenges:

Despite eradicating poliovirus globally by 99%. Pakistan and Afghanistan are the two only countries, where the transmission has not stopped. It could result in two lakh cases within 10 years, if not eradicated.

According to Pakistan's health minister, 90% of case in Pakistan are being imported from Afghanistan.

Major challenges in failure of eradication are ethnic, cultural and religious issues. Many refuse to polio vaccination because of mistrust and false religious interpretations. Furthermore, attacks on polio workers at many areas is also impacting the goal of complete eradication.

Importance of Vaccination

Vaccinations have been of great importance in eradicating poliovirus. 99% eradication globally is mainly due to vaccinations. In order to get rid of this disease, vaccination must be done properly, else this scourge of polio will never be eradicated from Pakistan.

c) Vitamins:

Vitamins were initially discovered by F. G. Hopkin. The term 'vitamin' was coined by C. Funk.

Definition:

vitamins are the organic compounds that the body requires in small amount to maintain health and functions of the body properly.

Types of vitamins

Vitamins are divided into two categories water soluble and fat soluble vitamins.

Water soluble:

These are the vitamins which are easily soluble in water. These vitamins can not be stored in body hence the extra amount easily pass out from body. Water soluble vitamins include;

Vitamin B

Vitamin C

Fat Soluble:

Fat soluble vitamins can be stored in body because these are soluble in fat. Their extra amount does not pass out from the body. Extra amount can cause hypervitaminosis. Hence, these vit should be taken with care.

Fat soluble vitamins include:

- Vitamin K
- Vitamin E
- Vitamin D
- Vitamin A

Contribution to human health:

Vitamins are the digestive nutrients which are required in small quantity. Although vitamins do not provide energy or calories to the body, they regulate chemical actions in metabolism. Vitamins are of crucial importance for human body functions and their deficiency can cause complications of functions and structures.

Importance of Vitamins:

1) **For Skin**: Vitamin B₂ (Riboflavin) and Vitamin B₃ (Niacin) are important for skin health. Their deficiency can cause skin dryness and cracks. Vit B₃ deficiency further causes pellagra, or yellow skin disease.

Deficiency would do what?

2) **For eyes hairs:**

Vitamin B₇, which is known as Biotin, is crucial for hair along with skin health. Its deficiency can cause hair loss and skin rashes.

3) **For eyes:**

Vitamin A (Retinol) is essential for vision. Its deficiency can cause night blindness.

a) Tropical cyclone

Definition:

Intense circular storm that originates over warm tropical oceans and is characterized by low atmospheric pressure, high winds, and heavy rains.

Characteristics:

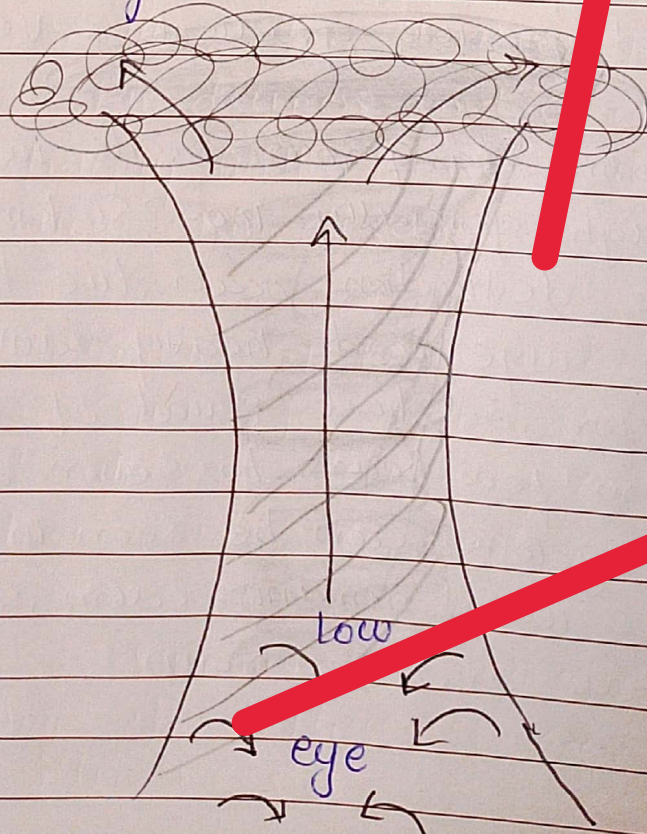
- It looks like a huge mass of air that just rotates, more disc like in shape than cyclone
- Shape of ~~tempe~~ these cyclones is elliptical
- Diameter of tropical cyclone is generally small, about 100-500 km
- It does not have clear frontal line system
- Isobars of tropical cyclone are in round shaped and pressure gradient is very steep
- These are more dangerous as its wind speed is high generally 100-250 km/h.
- Most of the destruction occurs due to strong winds, storm surge and heavy rains.
- They last for a short period of time generally from few hours to seven days.
- Eye of the cyclone can be seen in the center, where wind remains calm, sky remain clear and no rain.

Formation of tropical cyclones

Tropical cyclone forms due to thermal convection. They form in the tropical region between 10° to 30° degree North and South. These cyclones form only over the sea or oceans, where sea surface temperature is 27° or more and dissipate upon reaching the land.

Effects of Tropical cyclones

- The main effects of tropical cyclone include
- heavy rain, strong wind, large storm surge at landfall, and tornadoes
- Act to remove forest canopy as well as change the landscape near coasted areas by moving and reshaping sand dunes and causing extensive erosion along the coast



(5)

Cost Price = ₹ 1000
Discount = 20%
∴ Discount = $\frac{20}{100} \times 1000 = ₹ 200$
∴ Selling Price = ₹ 1000 - ₹ 200 = ₹ 800

$$\begin{aligned} \text{Selling Price} &= ₹ 800 \\ \text{Cost Price} &= ₹ 1000 \\ \therefore \text{Loss} &= ₹ 1000 - ₹ 800 = ₹ 200 \end{aligned}$$

∴ Loss = ₹ 200

The percentage loss of the cost price is
 $\frac{200}{1000} \times 100 = 20\%$

(6)

If a number is increased by 10% and then decreased by 10%.

The net change in the number is

Let the number be 100

$$\begin{aligned} \text{10\% of 100} &= 10 \\ \therefore 100 + 10 &= 110 \end{aligned}$$

$$\begin{aligned} \text{10\% of 110} &= 11 \\ \therefore 110 - 11 &= 99 \end{aligned}$$

∴ The number is 99

∴ The net change is 100 - 99 = 1