

Dos and Don'ts for General Science & Ability Paper

Hi there, you've done well. Know that acquiring knowledge is one thing and reproducing it in paper according to what's asked is another. There are a few things I would like to highlight.

1. A 5 marks part requires 2 sides (not more than that) of a paper. Know that there can be two or three parts of a question and their marks are divided accordingly. So, address all of them in a just manner.

2. Focus on time management. You get 35 minutes to solve one question and about 8 minutes per 5 mark part. Manage your time accordingly.

3. You need to understand that your paper is supposed to look more scientific than theoretical. So, add flowcharts and diagrams where required.

4. Your handwriting and neatness can be really impactful. Avoid cutting and overwriting.

5. Focus on your spellings and your grammar. Here, in GSA there's no deduction in marks but your expression will definitely create an impact.

6. In ability portion, give explanation for analytical ability question in words. You need to understand that a 5 mark part requires all steps written and explained.

Good luck for CSS 2025. You're gonna rock in sha Allah. :)

$$x = \frac{4}{13} \times \frac{9}{10} \times 600$$

$$x = 720 \text{ units}$$

So 720 units will be made in 12 days with 18 machines.

Q6 (c)

Distance by car, $d_1 = 450 \text{ m}$

time by car, $t_1 = 1 \text{ min} = 60 \text{ s}$

$$\text{speed of car, } v_1 = \frac{d_1}{t_1} = \frac{450}{60}$$

$$v_1 = \frac{15}{2} \text{ m/s}$$

Distance by train, $d_2 = 69 \text{ km} = 69000 \text{ m}$

time by train, $t_2 = 45 \text{ min} = 2700 \text{ s}$

$$\text{speed of train, } v_2 = \frac{d_2}{t_2} = \frac{69000}{2700}$$

$$v_2 = \frac{130}{9} \text{ m/s}$$

$$\text{Ratio} = \frac{v_1}{v_2} = \frac{15}{2} \div \frac{130}{9}$$

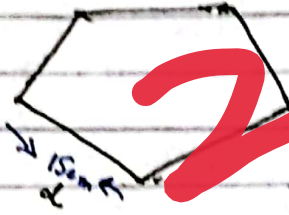
$$= \frac{3 \times 15}{2} \times \frac{9}{130}$$

$$\text{Ratio of speeds} = \frac{27}{52}$$

Q6 (d)

length of one
side of pentagon $a = 15\text{cm}$

perimeter of pentagon $= 5a$



putting value of a in above equation

perimeter of pentagon $= 5 \times 15$

perimeter of pentagon $= 75\text{cm}$

$= 0.75\text{m}$

Q7 (a)

Intelligence Quotient (I.Q)

Definition :

I.Q is a score used to quantify a person's level of intelligence based on standardized tests.

It is a measure of ~~gross~~ cognitive abilities such as reasoning, problem solving and comprehension.

Factors that affect I.Q

1. Genetics

Estimate suggests that 40 to 80% of variability in IQ

is related to genetic makeup a person inherits.

2- Place of Residence

Children living in cities tend to have more IQ

3- Physical activity

Children who have physical activity of more than 5 hours in week tend to have more IQ.

4- Family Income

Higher family income is associated with higher IQ.

5- Parental education

Children of highly educated parents tend to have higher IQ.

6- Cognitive Stimulation at home

The quality and quantity of cognitive stimulation a child receives impacts his IQ.

7- Nutrition

Malnutrition can reduce IQ by 15% in childhood.

8- School education

The quality of education a child receives influences his I.Q.

9- Socioeconomic Status (SES)

Higher SES is associated with higher heritability of I.Q. and vice versa.

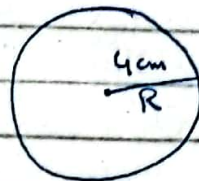
In short, genetic factors and a wide range of environmental factors from socioeconomic status to nutrition play important roles in determining a person's I.Q.

Relative influence of genes versus environment varies based on factors like age and socioeconomic status.

Q7 (b)

Radius of circle, $R = 4\text{cm}$

Circumference of circle, $C = ?$



$$\text{Circumference of circle} = 2\pi R \quad \text{--- (1)}$$

Putting value of R in above eq

$$\text{Circumference of circle} = 2 \times \frac{22}{7} \times 4$$

$$C = \frac{176}{7} \text{ cm} = \frac{176}{7 \times 100} \text{ m}$$

$$\text{Circumference of circle } C = \frac{176}{700} \text{ m}$$

Q7 (c)

Age of 5 students = 20, 21, 21, 22, 23
in ascending order

$$\text{i) Mean} = \frac{\text{Sum of 5 terms}}{\text{Total number of terms}}$$

$$= \frac{20 + 21 + 21 + 22 + 23}{5}$$

$$= \frac{107}{5} = 21.4$$

$$\text{Mean} = 21.4$$

ii) Median

Median is the middle term in orderly arranged data.

Given data is

20 , 21 , 21 , 22 , 23

$$\text{Median} = \left(\frac{n+1}{2}\right) \text{th term}$$

$$= \left(\frac{5+1}{2}\right) = \left(\frac{6}{2}\right) \text{th term}$$

$$= 3 \text{rd term}$$

$$\text{Median} = 21$$

c- Mode ^{most}
Mode is the ~~term~~ repeated term

which is 21 as it occurs
most repeatedly i.e. 2 times so

$$\boxed{\text{Mode} = 21}$$

d- Range

$$\begin{aligned} \text{Range} &= \text{highest term} - \text{lowest term} \\ &= 23 - 20 \end{aligned}$$

$$\boxed{\text{Range} = 3}$$

Q7 (d)

$$\text{Profit } P = 406000 \text{ Rs} \quad \text{--- (1)}$$

$$\text{Profit share of Tahir} = 15000 \times 12 \times x$$

$$\text{Profit share of Umar} = 30000 \times 7 \times x$$

$$\text{Profit share of Usman} = 45000 \times 4 \times x$$

Ratio of profit share for Tahir,
Umar, and Usman

$$\begin{aligned} 15000 \times 12x &:: 30000 \times 7x &:: 45000 \times 4x \\ 12x &:: 14x &:: 12x \end{aligned}$$

$$\text{total profit} = 12x + 14x + 12x = 38x \quad \text{--- (2)}$$

putting value of profit from Eq (1)

$$406000 = 38x$$

$$x = \frac{406000}{38} = \frac{203000}{19} \quad \text{--- (3)}$$

Share of Profit of Tahiz = $12x$

putting value of x from Eq (3)

$$\begin{aligned} \text{profit of Tahiz} &= \frac{12 \times 203000}{19} \\ &= \frac{2436000}{19} \text{ Rs} \end{aligned}$$

$$\begin{aligned} \text{Profit of Umar} &= 14x \\ &= 14 \times \frac{203000}{19} \\ &= \frac{2842000}{19} \text{ Rs} \end{aligned}$$

$$\begin{aligned} \text{Profit of Usman} &= 12x \\ &= \frac{12 \times 203000}{19} \\ &= \frac{2436000}{19} \text{ Rs} \end{aligned}$$

Add steps in your procedure
Try highlighting formulae