



GATE GENERAL APTITUDE – MASTER CHEATSHEET



SECTION WEIGHT

- 10 questions
- 15 marks
- Usually:
 - 5 × 1-mark
 - 5 × 2-mark

You don't need 100%.

8–9 correct answers = excellent return.



PART A: QUANTITATIVE APTITUDE (NUMERICAL)



1 Percentages

Shortcut facts

- $x\% = x/100$
- Increase by $x\% \Rightarrow$ multiply by $(1 + x/100)$
- Decrease by $x\% \Rightarrow$ multiply by $(1 - x/100)$

Successive change

$$a\% \text{ increase followed by } b\% \text{ decrease} = a - b - \frac{ab}{100}$$



If equal increase & decrease → **net decrease**



2 Ratios & Proportions

- $a : b = a/b$
- If $A:B = x:y$, total = $x+y$ parts

Shortcut

If salary ratio = 3:5 and total = 16000

→ one part = 2000

→ salaries = 6000, 10000



3 Averages

$$\text{Average} = \frac{\text{Sum}}{n}$$

Shortcut

- If average changes → use *deviation method*

- One new value added:

$$\text{New avg} = \text{Old avg} + \frac{(\text{New} - \text{Old avg})}{n + 1}$$

4 Time, Speed, Distance

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

Key tricks

- Same distance \Rightarrow speed $\propto 1/\text{time}$
 - Relative speed:
 - Same direction: $|v_1 - v_2|$
 - Opposite direction: $v_1 + v_2$
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5 Work & Time

If:

- A does work in x days \rightarrow rate = $1/x$
- B does work in y days \rightarrow rate = $1/y$

Together:

$$\text{Rate} = \frac{1}{x} + \frac{1}{y}$$

👉 Never memorize LCM tables. Use **rates**.

6 Simple Interest (SI)

$$\text{SI} = \frac{PTR}{100}$$

Where:

- P = Principal
 - T = Time
 - R = Rate
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7 Simple Probability

$$P(E) = \frac{\text{Favorable outcomes}}{\text{Total outcomes}}$$

Golden rules

- Independent events → multiply
 - "At least one" = $1 - (\text{none})$
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PART B: VERBAL ABILITY (EASY MARKS)

1 Reading Comprehension (RC)

Rule:

- 👉 Answer ONLY from the passage.
- 👉 Ignore real-world knowledge.

Tricks

- Extreme words (always, never) → usually wrong
 - Neutral, balanced options → usually right
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2 Sentence Completion

- Read full sentence first
- Fill blank mentally
- Match tone (positive/negative)

Shortcut

If sentence has:

- "Although", "But", "However" → contrast word needed
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3 Grammar

Common traps

- Subject-verb agreement
 - Tense consistency
 - Singular/plural mismatch
- 👉 Shorter, simpler sentence is often correct.
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4 Synonyms / Antonyms

- Eliminate unknown words first
 - Use **context**, not dictionary memory
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PART C: LOGICAL REASONING (VERY SCORABLE)

1 Series (Numbers / Letters)

Check in this order:

1.
 - / –
2. \times / \div
3. Squares / cubes
4. Alternating pattern

👉 If pattern not visible in 30 sec → skip.

2 Coding–Decoding

- Letter positions: A=1, Z=26
 - Check shift (+1, –1, +2...)
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3 Blood Relations

Shortcut

- Draw quickly
 - Mark gender
 - Solve visually
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4 Direction Sense

- Fix **North** initially
 - Left = 90° anticlockwise
 - Right = 90° clockwise
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5 Seating / Arrangement

- Linear vs circular
 - Start with **fixed clues**
 - Don't overthink
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EXAM-HALL STRATEGY FOR GA (VERY IMPORTANT)

Order of Attempt

1. Verbal
2. Logical
3. Quant (last)

Time Limit

- Max 15–20 minutes total
 - If question > 1 min → mark & move
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COMMON MISTAKES TO AVOID

- Over-calculating simple math
 - Second-guessing verbal answers
 - Spending too long on one question
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SAFE GUESSING RULE (WHEN NEEDED)

If you can eliminate 2 options confidently → attempt.

GA negative marking is mild — don't be scared.