

# Cognizant Quick exam pattern – By Durgesh StudyHub

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## *Quick exam pattern & what to focus on*

- Typical structure: Quantitative Aptitude, Logical / Analytical Reasoning, Verbal (Reading / Sentence / Grammar), and a Technical/Coding round. Recent GenC style practice papers list ~40 MCQs in ~40 minutes (aptitude), plus separate communication/coding rounds. (Patterns reported across prep sites; number/time may vary by year and hiring drive). [PREP INSTA+1](#)
  - High-priority topics to practice now:
    - Quant: time & work, ratios & proportions, percentages, speed & distance, trains, simple & compound interest, permutations & combinations (basic), basic number theory, average, mixture & allegation.
    - Reasoning: data sufficiency, selection/decision tables, coding-decoding, series, seating arrangements, blood relations, syllogisms, puzzles.
    - Verbal: RC passages, sentence correction, fill-in-the-blanks, para-jumbles, synonyms/antonyms.
    - Coding: arrays/strings, simple hashing, two-pointer, basic DP/greedy for easy–medium level.Sources used to match topics and recent question formats: PrepInsta, PlacementPreparation, GeeksforGeeks. [PREP INSTA+2Placement Preparation+2](#)
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## *Practice papers (3 short mock papers)*

Each paper: Quant (6 Qs), Reasoning (6 Qs), Verbal (4 Qs), + 1 short coding task. Try Paper A first under timed conditions: 40–45 minutes total.

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## Paper A — (Total 17 items)

### Quantitative (6)

- Q1. A train 125 m long passes a man running in the same direction in 10 seconds. If the man runs at 5 km/h, find the speed of the train (km/h). (MCQ: 50, 54, 56, 60)
- Q2. If 5 men can finish a job in 20 days working 8 hours a day, how many days will 8 men take to finish the same job working 10 hours a day? (integer)
- Q3. A bag contains 6 red and 4 blue balls. Two balls are drawn without replacement. Probability both are red? (fraction)
- Q4. Average of 8 numbers is 25. If one number 40 is removed, what is new average? (MCQ)
- Q5. Solve for x:  $3(x - 2) + 4 = 2x + 9$ . (simple linear)
- Q6. In how many ways can the letters of the word "LEVEL" be arranged? (counting)

### Reasoning (6)

- Q7. Data sufficiency: Statement: "A and B started a job. A alone can do the job in 12 days. If A and B together take 6 days, how many days would B alone take?" (Choose which statements suffice — classic structure)
- Q8. Series: 7, 14, 28, 56, ? (next term)
- Q9. Seating: Five friends A, B, C, D, E sit in a row. B sits to immediate left of C. D is at one of the ends. Who sits in the middle? (MCQ options)
- Q10. Coding-decoding: If in a code "EARTH" → "GCTJV" (each letter shifted by +2, +2, +2...), what is code for "MOON"?
- Q11. Blood relations: "P is the son of Q. R is sister of Q. T is daughter of P." Find relation of T to R.
- Q12. Logical puzzle: From five boxes numbered 1–5, only one contains a prize. Clues: (i) It's not in Box 1 or 3. (ii) If Box 2 has it, clue (iii) false. (iii) If Box 4 has it, Box 2 is empty. Determine which box holds the prize. (short reasoning)

### Verbal (4)

- Q13. Choose the sentence with correct grammar: (four short sentences with typical errors)
- Q14. Fill blank: "Not only \_\_\_ he talented, \_\_\_ he also hardworking." (options: is/and, is/but, is/so, was/and)
- Q15. One short RC: a 4-sentence passage + one inference question.
- Q16. Para jumble: Arrange sentences A–D into coherent paragraph.

### Coding (1)

- Q17 (Short coding): Given an array of integers, return the first non-repeating element. If none, return -1. (Provide algorithm/pseudocode and time complexity)
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## Paper B — (Total 17 items)

(Same sectional balance but different problems; examples: time & distance with relative speeds, work with pipes, seating puzzles, stronger data sufficiency, small RC passage, coding: reverse words in sentence).

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## Paper C — (Total 17 items)

(Include slightly tougher reasoning: decision tables, pattern matrix, quant: probability with conditional events, coding: count subarrays with sum K for small N).

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## Detailed step-by-step solutions — selected problems (from Paper A)

I solved representative problems fully so you can see method, speed tricks and template answers.

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### Quant — Q1 (train + man) — full solution

Problem restated: Train length  $L = 125$  m. It passes a man running in the same direction in 10 s. Man speed = 5 km/h. Find train speed in km/h.

Step-by-step:

1. When train and man go in **same direction**, relative speed = (speed of train – speed of man).
2. Distance to be covered by train to pass the man = length of the train = 125 m. Time = 10 s. So relative speed (in m/s) = distance / time =  $125 / 10 = 12.5$  m/s.
3. Convert man's speed to m/s:  $1 \text{ km/h} = 5/18 \text{ m/s}$ . So  $5 \text{ km/h} = 5 \times (5/18) \text{ m/s} = 25/18 \text{ m/s}$ . (Compute:  $25 \div 18 = 1.388\dots \text{ m/s}$ )  
But we will convert relative speed back to km/h to find train speed:  $12.5 \text{ m/s} = 12.5 \times (18/5) \text{ km/h} = (12.5 \times 3.6) \text{ km/h} = 45 \text{ km/h}$ . (Because  $1 \text{ m/s} = 3.6 \text{ km/h}$ .)
4. Relative speed in km/h = 45 km/h. So train speed – man speed = 45. Man speed = 5 km/h. So train speed =  $45 + 5 = \mathbf{50 \text{ km/h}}$ .

Answer: **50 km/h**. (Matches option A)

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### Quant — Q2 (work, men & hours) — full solution

Problem: 5 men finish job in 20 days working 8 hours/day. How many days will 8 men take if they work 10 hours/day?

Step-by-step:

1. Total work = (number of men)  $\times$  (days)  $\times$  (hours per day)  $\times$  (work rate per man per hour). But easier: work  $\propto$  men  $\times$  days  $\times$  hours (if every man-hour is equal). So compute total man-hours first:  
Total man-hours = 5 men  $\times$  20 days  $\times$  8 hours/day =  $5 \times 20 \times 8$ . Compute:  $5 \times 20 = 100$ ;  $100 \times 8 = 800$  man-hours.
2. With 8 men working 10 hours/day, daily man-hours =  $8 \times 10 = 80$  man-hours/day.
3. Required days = total man-hours / daily man-hours =  $800 / 80 = 10$  days.

Answer: **10 days.**

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### Quant — Q3 (probability without replacement)

Problem: Bag: 6 red, 4 blue. Draw two without replacement. Probability both red?

Step-by-step:

1. Probability first red =  $6/(6+4) = 6/10 = 3/5$ .
2. After drawing one red, remaining red = 5, total remaining = 9. So probability second red given first red =  $5/9$ .
3. Combined probability =  $(3/5) \times (5/9) = (3 \times 5)/(5 \times 9) = 3/9 = 1/3$ .

Answer: **1/3.**

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### Reasoning — Q7 (data sufficiency / work)

Restated (simple): A alone can do job in 12 days. A and B together take 6 days. Find B's time alone.

Step-by-step:

1. Rate of A =  $1/12$  job/day. Combined rate (A+B) =  $1/6$  job/day. So B's rate =  $(1/6 - 1/12) = (2/12 - 1/12) = 1/12$  job/day. (Compute step:  $1/6 = 2/12$ ; difference =  $1/12$ ).
2. So B alone takes 12 days.

Answer: **12 days.**

(If given as data sufficiency options, statement “A alone = 12 days” + “A+B = 6 days” together suffice.)

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### Reasoning — Q10 (coding of words)

Given: each letter shifted by +2 positions? Example: E→G, A→C, R→T, T→V, H→J (that matches “EARTH” → “GCTJV”). So mapping is +2 each letter (A→C etc.)

Find code for “MOON”.

Step-by-step:

1.  $M \rightarrow M + 2 = O$ .  $O \rightarrow O + 2 = Q$ .  $N \rightarrow N + 2 = P$ . So MOON → O Q Q P (note two O's become Q's).
2. So coded word = **OQQP**.

Answer: **OQQP**.

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### Verbal — Q14 (fill blank)

Sentence: “Not only \_\_\_ he talented, \_\_\_ he also hardworking.”

Classic structure is: “Not only is he talented, but he is also hardworking.” So answer: **is / but**.

Reason: Parallel grammatical construction requires auxiliary verb before subject after “Not only”, and connector “but” (followed by “also”) fits.

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### Coding — Q17 (first non-repeating element) — algorithm + python code

Problem: Given array of integers arr[], return first non-repeating element (leftmost element with count = 1). If none, return -1.

Algorithm (O(n) time, O(n) extra space):

1. First pass: build frequency map (hash/dict) of counts.
2. Second pass: iterate original array order; return the first element with count 1.
3. If none found, return -1.

Python solution (concise, correct):

```
def first_non_repeating(arr):  
    # pass 1: counts
```

```
counts = {}
for x in arr:
    counts[x] = counts.get(x, 0) + 1
# pass 2: find first with count 1
for x in arr:
    if counts[x] == 1:
        return x
return -1

# Example:
print(first_non_repeating([2,3,2,4,3,5])) # returns 4
```

Complexity:  $O(n)$  time,  $O(n)$  space.

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## *Mini practice plan & tips*

- Do 1 timed Paper (Paper A) start-to-finish under 45 minutes. Mark the tough ones and move on — don't get stuck.
- For quant, memorize conversion factors ( $1 \text{ m/s} = 3.6 \text{ km/h}$ ,  $1 \text{ km/h} = 5/18 \text{ m/s}$ ), LCM/ratio speed tricks.
- For reasoning, practice data-sufficiency and decision table questions — they appear frequently in GenC.
- For coding, practice easy array/string problems and get comfortable writing  $O(n)$  solutions with dicts. (Use GeeksforGeeks / LeetCode easy sets.) [GeeksforGeeks+1](#)