

GATE General Aptitude

Sample Paper – 1

Duration: 28 Minutes

Maximum Marks: 15

Instructions

- This paper contains **10** questions, modelled on the General Aptitude section of **GATE** conducted by the IITs and IISc.
- The **10-question** length and the **15-mark** total match the General Aptitude section of the real 65-question paper exactly: **5 questions of 1 mark** (Q1–Q5) and **5 questions of 2 marks** (Q6–Q10).
- Each question carries **negative marking of one-third of its allotted marks**: a wrong 1-mark question costs **0.33** and a wrong 2-mark question costs **0.67**. Unattempted questions carry no penalty.
- Every question here is a **Multiple Choice Question** with exactly one correct option. The real GA section may also include Multiple Select Questions (MSQ) and Numerical Answer Type (NAT) questions, and **those two types carry no negative marking** – never leave a NAT blank.
- Attempt this practice paper in one timed sitting of about **28 minutes**, the share this section earns at the paper's overall pace of 180 minutes for 65 questions.

Verbal Aptitude

Q1. The word most nearly **opposite** in meaning to *candid* is: [1 mark]

- (A) Frank
- (B) Outspoken
- (C) Evasive
- (D) Sincere

Q2. Select the **grammatically correct** sentence. [1 mark]



- (A) Neither the manager nor the engineers were able to explain the delay.
- (B) Neither the manager nor the engineers was able to explain the delay.
- (C) Neither the manager or the engineers were able to explain the delay.
- (D) Neither of the manager nor the engineers were able to explain the delay.

Q3. The four sentences below are in random order. Choose the option that arranges them into a coherent passage.

P. It was only then that the bridge's true load capacity became clear.

Q. Engineers installed strain gauges along the main span.

R. A commission was appointed to investigate the collapse.

S. Readings from the gauges were collected over the next six months. [1 mark]

- (A) Q, S, P, R
- (B) R, Q, S, P
- (C) P, R, Q, S
- (D) S, Q, R, P

Quantitative Aptitude

Q4. The price of a component is first increased by 25% and the new price is then decreased by 20%. The net change in the price is: [1 mark]

- (A) No change
- (B) An increase of 5%
- (C) A decrease of 5%
- (D) An increase of 45%

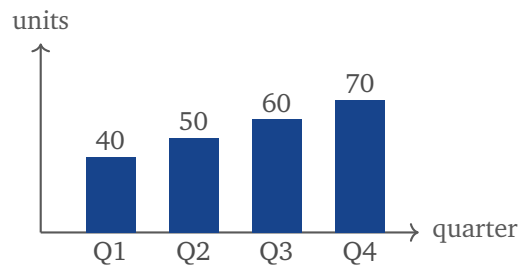
Q5. The average of five numbers is 30. When one number is removed, the average of the remaining four is 28. The number removed is: [1 mark]

- (A) 28



- (B) 30
- (C) 34
- (D) 38

Q6. The bar chart below shows the number of units produced by a plant in each quarter of a year. The percentage increase in production from Q1 to Q4 is: [2 marks]



- (A) 30%
- (B) 75%
- (C) 43%
- (D) 175%

Analytical Aptitude

Q7. Read the two statements below.

- I. All engineers in the firm attended the safety workshop.
- II. Some of those who attended the safety workshop were promoted.

Which one of the following conclusions **necessarily** follows? [2 marks]

- (A) All engineers in the firm were promoted.
- (B) Some engineers in the firm were promoted.
- (C) No engineer in the firm was promoted.
- (D) None of the above conclusions necessarily follows.

Q8. In a certain code, **MACHINE** is written as **NBDIJOF**. In the same code, **ENGINE** will be written as: [2 marks]

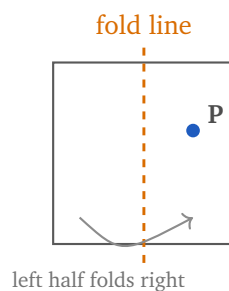
- (A) FOHJPF



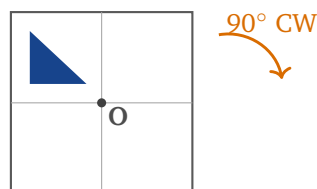
- (B) FMHJOF
- (C) FOHJOF
- (D) DMFHMD

Spatial Aptitude

- Q9.** A square sheet of paper is folded once along the dashed line shown below, so that the left half lies exactly on top of the right half. A single hole is then punched straight through the folded sheet at the point marked **P**. When the sheet is unfolded, the number of holes in it is: [2 marks]



- (A) 1
 - (B) 2
 - (C) 3
 - (D) 4
- Q10.** The transparent square sheet below carries an opaque shaded triangle in its top-left quadrant. The sheet is rotated **90 degrees clockwise** in its own plane, about the centre marked **O**. After the rotation the triangle lies in the: [2 marks]



- (A) Top-right quadrant
- (B) Bottom-right quadrant
- (C) Bottom-left quadrant
- (D) Top-left quadrant



Detailed Solutions

Q1.

Solution

Concept – an antonym question is answered by first fixing the meaning: Pin the word down, then look for its reverse rather than for a word that merely feels different.

Step 1 – define the word: *Candid* means open, honest and straightforward, saying what one actually thinks.

Step 2 – state the reverse: The opposite is being guarded, dodging the question or refusing to commit.

Step 3 – find that among the options: *Evasive* means exactly that, avoiding a direct answer.

Step 4 – use the pattern of the options: Notice that frank, outspoken and sincere are all **synonyms** of candid. Three options clustering together with one standing apart is a strong signal that the odd one out is the answer.

Why the other options are wrong:

- A, frank: is a near **synonym** of candid, not its opposite.
- B, outspoken: also means speaking openly and freely. It is a synonym.
- D, sincere: means genuine and honest, which again points the same way as candid.

Final Answer: Evasive $\Rightarrow$ C

Answer: (C) [Go Back to Q1](#)

Q2.

Solution

Concept – the proximity rule for correlative conjunctions: With *neither ... nor*, the verb agrees with the subject **nearer** to it, not with the first one.

Step 1 – identify the two subjects: They are *the manager* (singular) and *the engineers* (plural).

Step 2 – find the nearer subject: The verb follows *the engineers*, so *engineers* is the nearer subject.

Step 3 – apply the rule: *Engineers* is plural, so the verb must be plural: **were**.

Step 4 – check the pairing: *Neither* must pair with *nor*, never with *or*. Option A



satisfies both the pairing and the agreement, so it is correct.

Why the other options are wrong:

- B, "nor the engineers **was**": has the right pairing but the wrong agreement. It matches the verb to the distant singular *manager* instead of the nearer plural *engineers*.
- C, "Neither ... **or**": breaks the correlative pair. *Neither* takes *nor*; *either* takes *or*.
- D, "**Neither of** the manager nor the engineers": is doubly wrong. *Neither of* must be followed by a single plural group (for example *neither of the engineers*), and it cannot then take *nor* with a second subject.

Final Answer: Option A $\Rightarrow$ A

Answer: (A) [Go Back to Q2](#)

Q3.

Solution

Concept – sequencing is solved by finding the opener and the closer, not by reading all four options: Fix the two ends and the middle usually falls into place.

Step 1 – find the opener: R introduces the collapse and the commission. It is the only sentence that mentions the triggering event, and every other sentence presupposes an investigation is already under way. So R comes first.

Step 2 – find the closer: P begins "It was only then", which is a back-reference. It must follow whatever "then" points to, so P comes last.

Step 3 – order the middle two: The gauges must be installed (Q) before readings can be collected from them (S). So Q precedes S.

Step 4 – assemble: R, then Q, then S, then P, giving **RQSP**. This also reads correctly: the commission was appointed, gauges were installed, data was gathered for six months, and only then was the capacity clear.

Why the other options are wrong:

- A, QSPR: puts R last, so the collapse is introduced after its own investigation has concluded.
- C, PRQS: opens with P, but "It was only then" cannot open a passage as there is nothing yet for "then" to refer back to.
- D, SQRP: collects readings (S) before the gauges are installed (Q), which is impossible.



Final Answer: R, Q, S, P $\Rightarrow$ B

Answer: (B) [Go Back to Q3](#)

Q4.

Solution

Concept – successive percentage changes multiply, they do not add: This is the single most common trap in percentage questions.

Step 1 – take a convenient starting price: Let the original price be Rs. 100.

Step 2 – apply the 25% increase: Increase = $100 \times \frac{25}{100} = 25$

New price = $100 + 25 = 125$

Step 3 – apply the 20% decrease to the NEW price: Decrease = $125 \times \frac{20}{100} = 25$

Final price = $125 - 25 = 100$

Step 4 – compare with the start: Final price = Rs. 100 = original price, so the net change is **zero**.

Step 5 – see why it cancels exactly: As a multiplier, $1.25 \times 0.80 = 1.00$. The 20% is taken from the larger figure of 125, so it removes the same 25 that the increase added. The cancellation is a coincidence of these two particular numbers, not a general rule.

Why the other options are wrong:

- B, a 5% increase: comes from wrongly adding the percentages as $+25 - 20 = +5$, which ignores that the two percentages are taken from different bases.
- C, a 5% decrease: is the same addition error with the sign reversed.
- D, a 45% increase: comes from adding $25 + 20$ and treating the decrease as a further rise.

Final Answer: No change $\Rightarrow$ A

Answer: (A) [Go Back to Q4](#)



Q5.

Solution

Concept – averages are handled through totals: Convert every average into a sum, and the question becomes simple subtraction.

Step 1 – find the total of the five numbers: $\text{Sum} = \text{average} \times \text{count} = 30 \times 5 = 150$

Step 2 – find the total of the remaining four: $\text{Sum} = 28 \times 4 = 112$

Step 3 – subtract to find the number removed: $\text{Removed} = 150 - 112 = 38$

Step 4 – sanity check the direction: Removing a number pulled the average *down* from 30 to 28, so the number removed must be **above** the original average of 30. And 38 is above 30, which is consistent.

Why the other options are wrong:

- A, 28: is the new average, not the number removed. Removing a value of 28 would barely move the average and certainly would not lower it to 28.
- B, 30: is the original average. Removing a number equal to the average leaves the average **unchanged** at 30, not lowered.
- C, 34: is above the average, so it fails the direction check only in size. Checking it: $150 - 34 = 116$, and $116/4 = 29$, not 28.

Final Answer: $38 \Rightarrow \boxed{D}$

Answer: (D) [Go Back to Q5](#)

Q6.

Solution

Concept – percentage increase is always measured against the ORIGINAL value: The base is the earlier figure, never the later one and never the difference.

Step 1 – read the two values off the chart: $Q1 = 40$ units and $Q4 = 70$ units.

Step 2 – find the increase: $\text{Increase} = 70 - 40 = 30$ units

Step 3 – divide by the ORIGINAL value: $\text{Percentage increase} = \frac{30}{40} \times 100$

Step 4 – compute: $= 0.75 \times 100 = 75\%$

Step 5 – check it makes sense: Production rose from 40 to 70. That is well over half again as much but short of double, so the answer must lie between 50% and 100%. Only 75% does.

Why the other options are wrong:



- A, 30%: is the raw *difference* of 30 units read as a percentage. A difference is not a percentage until it is divided by a base.
- C, 43%: divides by the **wrong base**, using the final value: $30/70 \approx 43\%$. That would be the percentage *decrease* from Q4 back to Q1, which is a different question.
- D, 175%: is the **ratio** $70/40 \times 100$. Q4 is 175% of Q1, but the increase is only the part above 100%, that is 75%.

Final Answer: 75% $\Rightarrow$ B

Answer: (B) [Go Back to Q6](#)

Q7.

Solution

Concept – "necessarily follows" means true in EVERY possible case: One counterexample is enough to destroy a conclusion, however plausible it sounds.

Step 1 – restate statement I as a set relation: Every engineer is inside the set of workshop attendees. Engineers are a **subset** of attendees.

Step 2 – restate statement II: *Some* attendees were promoted. "Some" means at least one, and it says nothing about *which* attendees.

Step 3 – look for the gap: The attendees may include non-engineers, since a subset need not be the whole set. The promoted people are somewhere in the attendee set, but nothing ties them to the engineer part of it.

Step 4 – build a counterexample: Suppose the firm has 10 engineers and 20 administrators, and all 30 attended. Suppose the 3 promoted people were all administrators. Both statements are then true, yet *no* engineer was promoted.

Step 5 – build the opposite counterexample: Now suppose the 3 promoted people were all engineers. Both statements are still true, yet now some engineers *were* promoted.

Step 6 – conclude: Since both situations are consistent with the statements, neither "some engineers were promoted" nor "no engineer was promoted" is forced. Nothing necessarily follows.

Why the other options are wrong:

- A, all engineers were promoted: is far too strong. Statement II only says *some* attendees were promoted, so it cannot make every engineer promoted.
- B, some engineers were promoted: is the tempting answer, but Step 4 shows a case where both statements hold and no engineer is promoted. It *may* be



true, which is not the same as necessarily true.

- C, no engineer was promoted: fails for the mirror-image reason. Step 5 shows a case where both statements hold and engineers *were* promoted.

Final Answer: None of the above necessarily follows $\Rightarrow$ D

Answer: (D) [Go Back to Q7](#)

Q8.

Solution

Concept – crack the code on the given pair, then apply it mechanically: Never guess the rule from the answer options.

Step 1 – line up the given pair letter by letter: $M \rightarrow N$, $A \rightarrow B$, $C \rightarrow D$, $H \rightarrow I$, $I \rightarrow J$, $N \rightarrow O$, $E \rightarrow F$

Step 2 – name the rule: Every letter moves **one place forward** in the alphabet. The rule is a +1 shift, applied to all seven letters with no exception.

Step 3 – apply it to ENGINE, letter by letter: $E \rightarrow F$

$N \rightarrow O$

$G \rightarrow H$

$I \rightarrow J$

$N \rightarrow O$

$E \rightarrow F$

Step 4 – assemble: The code word is **FOHJOF**.

Step 5 – note the repeat as a check: ENGINE has E at position 1 and 6, and N at position 2 and 5. So the code must repeat too: F at 1 and 6, O at 2 and 5. FOHJOF does exactly that, which confirms it.

Why the other options are wrong:

- A, FOHJPF: shifts the fifth letter N by **two** places to P instead of one to O. It also breaks the repeat check, since the two Ns should encode identically but here give O and P.
- B, FMHJOF: moves the second letter N **backward** to M instead of forward to O.
- D, DMFHMD: shifts every letter one place **backward** instead of forward. It is the mirror-image error, and it is placed to catch anyone who fixed the direction of the shift by guessing.



Final Answer: FOHJOF $\Rightarrow$ C

Answer: (C) [Go Back to Q8](#)

Q9.

Solution

Concept – a punch makes one hole per LAYER it passes through: So the question is really "how many layers of paper are under the punch?"

Step 1 – count the folds: The sheet is folded **once**.

Step 2 – convert folds into layers: One fold doubles the paper, so the sheet is now **2 layers** thick everywhere.

Step 3 – check that the punch actually goes through both layers: Point P lies in the right half of the sheet. After the left half is folded onto the right half, the right half is covered by the left half, so P sits over 2 layers. The punch passes through both.

Step 4 – count the holes on unfolding: 2 layers punched gives **2 holes**: one at P itself, and one at the position on the left half that was lying on top of P, which is the mirror image of P about the fold line.

Step 5 – note the general rule: n folds give 2^n layers, so 1 fold gives 2 holes, 2 folds give 4, 3 folds give 8. The holes are always placed symmetrically about the fold lines.

Why the other options are wrong:

- A, 1: would be right only if the sheet were **not folded**, so that the punch passed through a single layer.
- C, 3: cannot arise from folding. Layer counts double, so they go 1, 2, 4, 8. An odd count above one is not reachable this way.
- D, 4: is the answer for **two** folds, giving $2^2 = 4$ layers. The question specifies one fold only.

Final Answer: 2 $\Rightarrow$ B

Answer: (B) [Go Back to Q9](#)



Q10.

Solution

Concept – track one corner, not the whole picture: Rotation questions become easy once you follow a single marked feature instead of trying to re-imagine the entire figure.

Step 1 – fix the starting position: The triangle occupies the **top-left** quadrant.

Step 2 – work out where a 90 degree clockwise turn sends each quadrant: Clockwise means top goes to right. So:

top-left → top-right

top-right → bottom-right

bottom-right → bottom-left

bottom-left → top-left

Step 3 – apply it to the triangle: The triangle starts top-left, so it lands in the **top-right** quadrant.

Step 4 – check with a physical intuition: Turn the page 90 degrees clockwise and watch the top-left corner. It swings across the top and comes to rest where the top-right corner used to be. That confirms Step 3.

Step 5 – note the direction trap: Had the rotation been *anticlockwise*, the top-left would have gone to the bottom-left instead. The direction of the turn is the whole question, so read it carefully.

Why the other options are wrong:

- B, bottom-right: is where the triangle would land after a **180 degree** rotation, that is two clockwise quarter turns instead of one.
- C, bottom-left: is the result of a 90 degree **anticlockwise** rotation. This is the intended trap for anyone who turns the figure the wrong way.
- D, top-left: is the starting position, which would mean no rotation at all, or a full 360 degree turn.

Final Answer: Top-right quadrant ⇒ A

Answer: (A) [Go Back to Q10](#)



Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	C	2	A	3	B	4	A	5	D
6	B	7	D	8	C	9	B	10	A

