NATA Aptitude Test (Part B)

Sample Paper – 6

Duration: 90 Minutes **Maximum Marks: 120**

Instructions

- This paper is the **Part B (Aptitude)** portion of the **NATA** (National Aptitude Test in Architecture), with **50** questions for **120 marks**.
- It has two parts: **Part B1 – 42 Multiple Choice Questions** (Q1–Q42, one correct option) and **Part B2 – 8 Numerical Answer Questions** (Q43–Q50, write the answer as a number).
- **Questions 1–30 carry +2 marks each** and **Questions 31–50 carry +3 marks each**. There is **no negative marking**; an unattempted or wrong answer scores 0.
- Questions cover **Mathematics and Numerical Ability**, **Visual and Spatial Reasoning**, **Logical Reasoning**, **Language Interpretation**, **Design Sensitivity**, and **General Knowledge in Architecture and Design**.
- Personal calculators, mobile phones and other electronic gadgets are strictly prohibited.

Part B1: Multiple Choice Questions

Q1. Find the next number in the series: $2,\ 3,\ 5,\ 7,\ 11,\ ?$

(A) 12

(B) 13

(C) 14

(D) 15

Q2. In a colony of 6000 people, 40% are men and 35% are women; the rest are children. How many children are there in the colony?

(A) 1200

(B) 1350

(C) 1500

(D) 1800

Q3. Two numbers are in the ratio $4 : 9$. If their sum is 104, what is the larger number?

(A) 72

(B) 64

(C) 56

(D) 80

Q4. The average of six numbers is 50. If one number, 25, is removed, what is the average of the remaining five numbers?

(A) 52

(B) 54

(C) 55

(D) 58

Q5. A bus travels 160 km in 4 hours. Maintaining the same speed, how far will it travel in 7 hours?

(A) 240 km

(B) 260 km

(C) 300 km

(D) 280 km

Q6. Find the compound interest on Rs. 20000 for 2 years at 10% per annum, compounded annually.

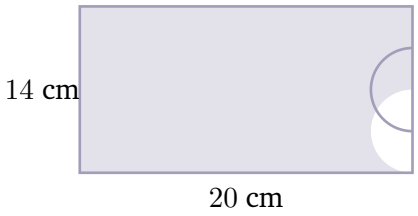
(A) Rs. 4000

(B) Rs. 4200

(C) Rs. 4400

(D) Rs. 2200

Q7. In the figure below, a rectangle of length 20 cm and breadth 14 cm has a semicircle removed from one short side (radius = 7 cm). Using $\pi = \frac{22}{7}$, find the area of the shaded region.



(A) 203 cm^2

(B) 280 cm^2

(C) 210 cm^2

(D) 197 cm^2

Q8. If $\cos\theta = \frac{12}{13}$ and θ is acute, what is the value of $\tan\theta$?

(A) $\frac{12}{5}$

(B) $\frac{13}{12}$

(C) $\frac{5}{12}$

(D) $\frac{5}{13}$

Q9. What are the roots of the quadratic equation $x^2 - 9x + 20 = 0$?

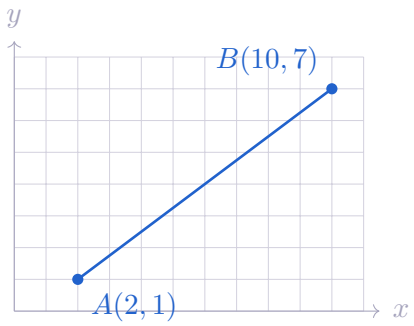
(A) 2 and 10

(B) 4 and 5

(C) -4 and -5

(D) 1 and 20

Q10. Find the distance between the points $A(2, 1)$ and $B(10, 7)$ shown on the grid below.



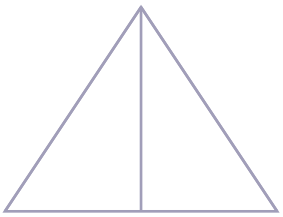
(A) 14

(B) 12

(C) 8

(D) 10

Q11. Count the total number of triangles in the figure below.



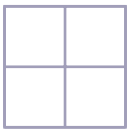
(A) 3

(B) 4

(C) 5

(D) 6

Q12. How many squares (of all sizes) are there in the 2×2 grid shown below?



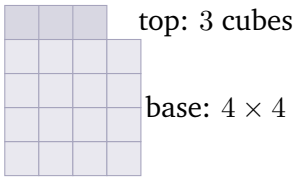
(A) 4

(B) 5

(C) 6

(D) 8

Q13. The solid below is built from identical unit cubes stacked as a 4×4 base with a smaller block on top. How many unit cubes are used in all?



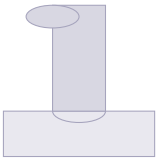
(A) 16

(B) 18

(C) 19

(D) 21

Q14. A solid is made of a cylinder standing upright on a square slab, as shown. What is its **top view** (the shape seen looking straight down)?



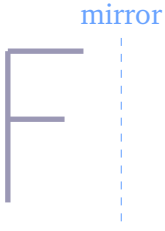
(A) A single plain square

(B) A circle inside a square

(C) Two circles side by side

(D) A triangle inside a square

Q15. When the capital letter **F** (shown below) is held up to a vertical mirror placed to its right, which way do the two horizontal arms of its reflection point?



(A) The arms still point to the right

(B) The letter looks identical to the original

(C) The letter turns upside down

(D) The arms point to the left and the vertical stroke is on the right

Q16. A square sheet is folded once along its horizontal centre line, then a single round hole is punched near the folded edge. When the paper is unfolded, how many holes appear and how are they arranged?

(A) Two holes placed symmetrically about the horizontal centre line, one above the other

(B) Four holes in a square pattern

(C) One hole at the centre

(D) Two holes placed side by side

Q17. In the series below, an arrow rotates by a fixed angle at each step. Through what angle does it turn from one figure to the next?

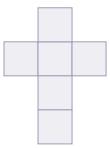
(A) 45° anticlockwise

(B) 90° anticlockwise

(C) 45° clockwise

(D) 180°

Q18. Which of the flat figures described below is a valid **net** that folds up into a closed cube? (A net of a cube has exactly six squares arranged so no two overlap when folded.) The "T" net is shown.



(A) A row of six squares bent into a closed loop

(B) The “T”-shaped arrangement of six squares shown above

(C) A single L-shape of four squares

(D) Five squares forming a plus sign

Q19. Find the next term in the letter series: $B,\ D,\ G,\ K,\ P,\ ?$

(A) U

(B) W

(C) T

(D) V

Q20. If in a certain code **PLAN** is written as **SODQ**, how is **ROOF** written in the same code?

(A) URRI

(B) ROOF

(C) URRH

(D) TRRI

Q21. Pointing to a man, Meena said, “He is the only brother of my mother.” How is the man related to Meena?

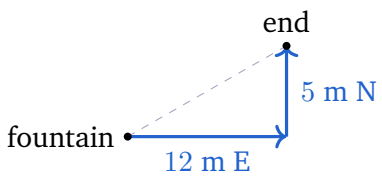
(A) Father

(B) Cousin

(C) Maternal uncle

(D) Grandfather

Q22. A gardener walks 12 m East from a fountain, then turns left and walks 5 m North, as traced below. How far is he from the fountain, and in which general direction?



(A) 17 m, North-East

(B) 13 m, North-East

(C) 7 m, East

(D) 15 m, North

Q23. Statements: (i) All gardens are green spaces. (ii) All green spaces need water. Which conclusion definitely follows?

(A) All things that need water are gardens

(B) No garden needs water

(C) Some green spaces are not gardens

(D) All gardens need water

Q24. Four friends W, X, Y and Z sit around a circular table facing the centre. X is to the immediate right of W, and Y is directly opposite X. Who sits to the immediate left of W?

(A) Z

(B) Y

(C) X

(D) Cannot be determined

Q25. What is the angle between the hour hand and the minute hand of a clock at exactly 5:15?

(A) 60°

(B) 75°

(C) 67.5°

(D) 90°

Q26. Find the odd one out: $16,\ 36,\ 64,\ 81,\ 30$.

(A) 16

(B) 64

(C) 81

(D) 30

Q27. Choose the word that is closest in meaning (synonym) to **ROBUST**.

(A) Fragile

(B) Sturdy

(C) Hollow

(D) Faded

Q28. Complete the analogy: **Sculptor** is to **Statue** as **Composer** is to _____.

(A) Orchestra

(B) Audience

(C) Symphony

(D) Piano

Q29. Choose the word that best completes the sentence: "The landscape garden was admired for its _____ layout, where every path led the eye to a new view."

(A) harmonious

(B) chaotic

(C) barren

(D) gloomy

Q30. In the standard artists' colour wheel, which of the following is a set of the three **secondary** colours?

(A) Red, Yellow, Blue

(B) Black, White, Grey

(C) Red, Green, Blue

(D) Orange, Green, Violet

Q31. In a circular flower bed where identical petals of planting radiate evenly outward from a central point, the design is said to have which kind of balance?

(A) Asymmetrical balance

(B) Radial balance

(C) No balance

(D) Symmetrical (formal) balance

Q32. Three of the following are man-made (manufactured) building materials and one is natural. Pick the **odd one out**.

(A) Glass

(B) Steel

(C) Granite

(D) Brick

Q33. Identify the tapering tower shown below, the tallest brick minaret in the world.

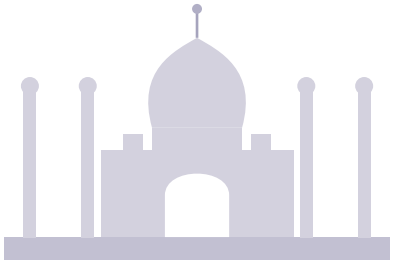
(A) Qutub Minar

(B) Charminar

(C) Jam Minaret

(D) Fateh Burj

Q34. The white-marble mausoleum shown below, one of the New Seven Wonders of the World, stands in which city?



(A) Delhi

(B) Agra

(C) Lucknow

(D) Jaipur

Q35. The square monument shown below, with four grand arches and four corner minarets, is located in which country?

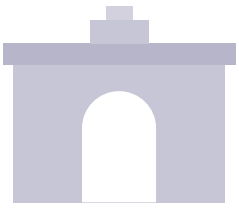
(A) Iran

(B) Turkey

(C) Pakistan

(D) India

Q36. The free-standing war-memorial archway shown below stands at the centre of New Delhi. Which architect designed it?



(A) Charles Correa

(B) Laurie Baker

(C) Edwin Lutyens

(D) Herbert Baker

Q37. The building shown below, shaped like a half-open lotus, is clad mainly in which material?

(A) White marble

(B) Red sandstone

(C) Glass curtain wall

(D) Exposed brick

Q38. The city of Chandigarh was master-planned, and many of its capitol buildings designed, by which famous modern architect?

(A) Frank Lloyd Wright

(B) Antoni Gaudí

(C) Zaha Hadid

(D) Le Corbusier

Q39. A South Indian temple with a tall pyramidal gateway tower called a *gopuram* over its entrance belongs to which architectural style?

(A) Nagara

(B) Dravidian

(C) Gothic

(D) Vesara

Q40. A structural beam or slab that is supported at one end only and projects out freely into space (as in a balcony) is called a:

(A) Lintel

(B) Plinth

(C) Cantilever

(D) Arch

Q41. In town planning and building bye-laws, the abbreviation **FAR** stands for which of the following?

(A) Floor Area Ratio

(B) Fire And Rescue

(C) Frontage Access Road

(D) Final Approval Report

Q42. The Aga Khan Award is a major international prize given for outstanding work in which field?

(A) Cinema

(B) Poetry

(C) Sculpture

(D) Architecture

Part B2: Numerical Answer Questions

Q43. What is 32% of 400? *(Numerical Answer Type: write your answer as a number.)*

Q44. A rectangular sheet measures 19 cm by 8 cm. Find its area (in square cm). *(Numerical Answer Type: write your answer as a number.)*

Q45. An amount of Rs. 136 is divided between two people in the ratio $3 : 5$. How much (in rupees) does the person with the larger share get? *(Numerical Answer Type: write your answer as a number.)*

Q46. Find the amount (in rupees) on Rs. 11000 for 2 years at 10% per annum, compounded annually. *(Numerical Answer Type: write your answer as a number.)*

Q47. A vehicle covers 280 km in 4 hours at a steady pace. Find its speed (in km/h). *(Numerical Answer Type: write your answer as a number.)*

Q48. Find the next term of the series: $7,\ 14,\ 21,\ 28,\ 35,\ ?$ *(Numerical Answer Type: write your answer as a number.)*

Q49. Find the average of the five numbers $64,\ 66,\ 68,\ 70,\ 72$. *(Numerical Answer Type: write your answer as a number.)*

Q50. Two angles of a triangle measure 60° and 70°. Find the third angle (in degrees). *(Numerical Answer Type: write your answer as a number.)*

Detailed Solutions

Q1.

Solution

Concept — Special-number series: When the terms do not differ by a fixed amount, check whether they form a well-known sequence such as the prime numbers.

Step 1 — Recognise the list: $2, 3, 5, 7, 11$ are the first five *prime* numbers (numbers divisible only by 1 and themselves).

Step 2 — Next prime: After 11, the next prime is 13 (since 12 is divisible by 2 and 3).

Why other options are wrong:

- (A) $12 = 2 \times 6$, (C) $14 = 2 \times 7$, (D) $15 = 3 \times 5$: all are composite, not prime.

Final Answer: The next prime is $13 \Rightarrow$ B

Answer: (B) Go Back to Q1

Q2.

Solution

Concept — Percentages of a whole: The parts must add to 100%; children make up whatever remains after men and women.

Step 1 — Percentage of children: $100\% - 40\% - 35\% = 25\%$.

Step 2 — Compute the number:

$$25\% \text{ of } 6000 = \frac{25}{100} \times 6000 = 1500.$$

Why other options are wrong:

- (A) 1200 is 20%; (B) 1350 and (D) 1800 do not match 25% of 6000.

Final Answer: There are 1500 children $\Rightarrow$ C

Answer: (C) Go Back to Q2

Q3.

Solution

Concept — Dividing in a ratio: Split the total into equal parts equal to the sum of the ratio terms, then scale.

Step 1 — Value of one part: Total parts $= 4 + 9 = 13$, so one part $= \frac{104}{13} = 8$.

Step 2 — Larger number: The larger share has 9 parts:

$$9 \times 8 = 72.$$

Why other options are wrong:

- (B) $64 = 8 \times 8$ and (D) $80 = 10 \times 8$ use the wrong number of parts; (C) 56 is the difference, not the larger share.

Final Answer: The larger number is $72 \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q3

Q4.

Solution

Concept — Average and total: The total of a set = average $\times$ count. Remove a value by subtracting it from the total.

Step 1 — Original total: $6 \times 50 = 300$.

Step 2 — New average: Remove 25: new total $= 300 - 25 = 275$ over 5 numbers, so

$$\text{average} = \frac{275}{5} = 55.$$

Why other options are wrong:

- (A) 52, (B) 54, (D) 58: none equals $275 \div 5$.

Final Answer: The new average is $55 \Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q4

Q5.

Solution

Concept — Constant speed: Distance = speed × time; at fixed speed distance is proportional to time.

Step 1 — Find the speed: speed $= \frac{160}{4} = 40$ km/h.

Step 2 — Distance in 7 h:

$$40 \times 7 = 280 \text{ km}.$$

Why other options are wrong:

- (A) 240 km is 6 h; (B) 260 km and (C) 300 km use a wrong speed or time.

Final Answer: The bus travels 280 km $\Rightarrow$ D

Answer: (D) Go Back to Q5

Q6.

Solution

Concept — Compound interest: Amount $A = P\left(1 + \frac{r}{100}\right)^n$, and CI $= A - P$.

Step 1 — Amount after 2 years:

$$A = 20000\left(1 + \frac{10}{100}\right)^2 = 20000 \times (1.1)^2 = 24200.$$

Step 2 — Interest: CI $= 24200 - 20000 = 4200$.

Why other options are wrong:

- (A) Rs. 4000 is simple interest; (C) Rs. 4400 over-counts; (D) Rs. 2200 is one year only.

Final Answer: The compound interest is Rs. 4200 $\Rightarrow$ B

Answer: (B) Go Back to Q6

Q7.

Solution

Concept — Composite area: Shaded area = rectangle area − semicircle area.

Step 1 — Rectangle: $20 \times 14 = 280$ cm^2.

Step 2 — Semicircle (radius 7):

$$\tfrac{1}{2}\pi r^2 = \tfrac{1}{2} \times \tfrac{22}{7} \times 7^2 = \tfrac{1}{2} \times \tfrac{22}{7} \times 49 = 77 \text{ cm}^2.$$

Step 3 — Subtract: $280 - 77 = 203$ cm^2.

Why other options are wrong:

- (B) 280 ignores the cut; (C) 210 and (D) 197 use a wrong semicircle area.

Final Answer: The shaded area is 203 cm^2 $\Rightarrow$ A

Answer: (A) Go Back to Q7

Q8.

Solution

Concept — Right-triangle trig: For $\cos\theta = \frac{\text{adj}}{\text{hyp}}$, find the third side by Pythagoras, then form $\tan\theta = \frac{\text{opp}}{\text{adj}}$.

Step 1 — Find the opposite side: With adj = 12, hyp = 13: opp $= \sqrt{13^2 - 12^2} = \sqrt{25} = 5$.

Step 2 — Form the tangent:

$$\tan\theta = \frac{5}{12}.$$

Why other options are wrong:

- (A) $\frac{12}{5} = \cot\theta$ (inverted); (B) $\frac{13}{12} = \sec\theta$; (D) $\frac{5}{13} = \sin\theta$, not tan.

Final Answer: $\tan\theta = \frac{5}{12} \Rightarrow$ C

Answer: (C) Go Back to Q8

Q9.

Solution

Concept — Factorising a quadratic: For $x^2 - (a+b)x + ab = 0$, the roots are a and b, where $a + b = 9$ and $ab = 20$.

Step 1 — Find the pair: Two numbers with sum 9 and product 20 are 4 and 5, since $4 + 5 = 9$ and $4 \times 5 = 20$.

Step 2 — Write the roots:

$$x = 4 \quad \text{or} \quad x = 5.$$

Why other options are wrong:

- (A) $2, 10$ give product 20 but sum 12; (C) $-4, -5$ give $+9x$ wrong sign; (D) $1, 20$ give sum 21.

Final Answer: The roots are 4 and $5 \Rightarrow$ B

Answer: (B) Go Back to Q9

Q10.

Solution

Concept — Distance formula: For points (x_1, y_1) and (x_2, y_2), distance $= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$.

Step 1 — Differences: $\Delta x = 10 - 2 = 8$, $\Delta y = 7 - 1 = 6$.

Step 2 — Apply the formula:

$$\sqrt{8^2 + 6^2} = \sqrt{64 + 36} = \sqrt{100} = 10.$$

Why other options are wrong:

- (A) $14 = 8 + 6$ adds the legs; (B) 12 and (C) 8 ignore the right-triangle relation.

Final Answer: The distance $AB = 10 \Rightarrow$ D

Answer: (D) Go Back to Q10

Q11.

Solution

Concept — Counting triangles: Count the small triangles first, then combine them into larger ones.

Step 1 — The single cevian: A vertical line drops from the apex to the midpoint of the base, splitting the big triangle into two smaller ones.

Step 2 — Tally: Two small triangles (left and right halves) plus the one whole big triangle give $2 + 1 = 3$ triangles in all.

Why other options are wrong:

- (B) 4, (C) 5 and (D) 6 over-count; there is no horizontal cross-line here to create more triangles.

Final Answer: There are 3 triangles $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q11

Q12.

Solution

Concept — Squares in an $n \times n$ grid: The number of squares of all sizes is $1^2 + 2^2 + \cdots + n^2$.

Step 1 — Apply for $n = 2$:

$$1^2 + 2^2 = 1 + 4 = 5.$$

Step 2 — Interpret: 4 unit squares plus 1 large 2×2 square give 5 in total.

Why other options are wrong:

- (A) 4 counts only unit squares; (C) 6 and (D) 8 over-count.

Final Answer: There are 5 squares $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q12

Q13.

Solution

Concept — Counting stacked cubes: Add the cubes layer by layer.

Step 1 — Base layer: A 4×4 arrangement uses $4 \times 4 = 16$ cubes.

Step 2 — Top block: A small block of 3 cubes sits on top.

Step 3 — Total:

$$16 + 3 = 19.$$

Why other options are wrong:

- (A) 16 forgets the top; (B) 18 under-counts; (D) 21 adds too many.

Final Answer: 19 unit cubes are used $\Rightarrow$ C

Answer: (C) Go Back to Q13

Q14.

Solution

Concept — Orthographic views: The top view shows the outline seen looking straight down, with hidden inner edges drawn as lines.

Step 1 — Look down on the solid: The square slab's top face is a large square; the circular top of the cylinder appears as a circle inside that outline.

Step 2 — Result: The top view is a circle nested centrally inside a square.

Why other options are wrong:

- (A) ignores the cylinder; (C) two circles need two cylinders; (D) a triangle is wrong as nothing is triangular.

Final Answer: A circle inside a square $\Rightarrow$ B

Answer: (B) Go Back to Q14

Q15.

Solution

Concept — Mirror images: A vertical mirror swaps left and right (a lateral flip) while keeping up and down the same.

Step 1 — Flip the F: The letter F normally has its vertical stroke on the left and arms pointing right. A mirror on the right reverses left-right, so the vertical stroke moves to the right and the arms point left.

Step 2 — Confirm: Top and bottom are unchanged, so the F is not turned upside down and is not identical to the original.

Why other options are wrong:

- (A) arms still right ignores the flip; (B) "identical" is false; (C) upside-down would need a horizontal mirror.

Final Answer: Arms point left, spine on the right $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q15

Q16.

Solution

Concept — Paper folding and punching: A single fold creates a line of symmetry; a punch through both layers makes a hole on each layer, mirrored about the fold line.

Step 1 — One horizontal fold: The fold line is the horizontal centre of the sheet. One punch goes through two layers.

Step 2 — Unfold: Two holes appear, one above the other, placed symmetrically about the horizontal centre line.

Why other options are wrong:

- (B) four holes needs two folds; (C) one hole ignores the second layer; (D) "side by side" needs a vertical fold.

Final Answer: Two holes symmetric about the horizontal centre line $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q16

Q17.

Solution

Concept — Rotation in a figure series: Measure the turn of the arrow from one frame to the next.

Step 1 — Track the arrow: It points right ($0°$), then down-right ($-45°$), then down ($-90°$). Each step is a turn of $45°$ in the clockwise sense.

Step 2 — Next term: Continuing $45°$ clockwise, the arrow would point down-left ($-135°$).

Why other options are wrong:

- (A) $45°$ anticlockwise is the wrong direction; (B) $90°$ anticlockwise turns the wrong way and too far; (D) $180°$ skips steps.

Final Answer: The arrow turns $45°$ clockwise each step $\Rightarrow$ C

Answer: (C) Go Back to Q17

Q18.

Solution

Concept — Nets of a cube: A cube net has exactly six squares that fold without overlap into the six faces. The "T" (or cross-like) shape is a valid net.

Step 1 — Test the T: The vertical column of four squares wraps round as four side faces; the two squares on the top arm fold to become the top and the remaining face. No overlap occurs, so it folds into a cube.

Step 2 — Reject the others: A net must have exactly six squares arranged so folding closes the box without overlap.

Why other options are wrong:

- (A) a closed loop of six overlaps when folded; (C) four squares are too few; (D) a plus of five squares has only five faces.

Final Answer: The "T" of six squares folds into a cube $\Rightarrow$ B

Answer: (B) Go Back to Q18

Q19.

Solution

Concept — Letter series by position: Convert letters to their alphabet positions and study the gaps.

Step 1 — Positions: $B = 2, D = 4, G = 7, K = 11, P = 16$. Differences are $2, 3, 4, 5$, so the next gap is 6.

Step 2 — Next letter: $16 + 6 = 22$, and the 22nd letter is V.

Why other options are wrong:

- (A) $U = 21$ uses gap 5; (C) $T = 20$ and (B) $W = 23$ miss the gap of 6.

Final Answer: The next letter is $V \Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q19

Q20.

Solution

Concept — Coding by shifting letters: Compare each coded letter with the original to find the rule.

Step 1 — Find the shift: $P \to S, L \to O, A \to D, N \to Q$: every letter moves forward by 3.

Step 2 — Apply to ROOF: $R \to U, O \to R, O \to R, F \to I$, giving

URRI.

Why other options are wrong:

- (B) ROOF is unshifted; (C) URRH mis-shifts F; (D) TRRI shifts R by only 2.

Final Answer: ROOF is coded as URRI $\Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q20

Q21.

Solution

Concept — Blood relations: Decode the phrase from the speaker's point of view.

Step 1 — "The only brother of my mother": Your mother's brother is your maternal uncle.

Step 2 — Conclude: So the man is Meena's maternal uncle.

Why other options are wrong:

- (A) Father would be the mother's husband, not her brother; (B) Cousin and (D) Grandfather are the wrong relation.

Final Answer: The man is Meena's maternal uncle $\Rightarrow$ C

Answer: (C) Go Back to Q21

Q22.

Solution

Concept — Direction sense as a right triangle: The East leg and the North leg meet at a right angle; the straight-line distance is the hypotenuse.

Step 1 — Apply Pythagoras:

$$\sqrt{12^2 + 5^2} = \sqrt{144 + 25} = \sqrt{169} = 13 \text{ m}.$$

Step 2 — Direction: Moving East then North lands him to the North-East of the fountain.

Why other options are wrong:

- (A) 17 m adds the legs; (C) 7 m subtracts them; (D) 15 m is unrelated.

Final Answer: He is 13 m away, to the North-East $\Rightarrow$ B

Answer: (B) Go Back to Q22

Q23.

Solution

Concept — Syllogism (chaining sets): If all A are B and all B are C, then all A are C.

Step 1 — Chain the statements: All gardens $\subseteq$ green spaces $\subseteq$ things that need water, so every garden needs water.

Step 2 — Check direction: The reverse (all things that need water are gardens) does not follow.

Why other options are wrong:

- (A) reverses the inclusion; (B) contradicts the chain; (C) "some green spaces are not gardens" is not guaranteed by the given "all" statements.

Final Answer: All gardens need water $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q23

Q24.

Solution

Concept — Circular seating: For people facing the centre, "left" and "right" are from the seated person's own viewpoint.

Step 1 — Place W and X: X is immediately right of W. Facing the centre, going anticlockwise the order is $\ldots W, X \ldots$ so that X is on W's right.

Step 2 — Use Y opposite X: With four seats, Y sits opposite X; the only remaining seat, to W's immediate left, is taken by Z.

Why other options are wrong:

- (B) Y is opposite X, not beside W; (C) X is on W's right; (D) the data fix the arrangement.

Final Answer: Z sits to W's immediate left $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q24

Q25.

Solution

Concept — Clock angles: Use the standard rates: the minute hand moves 6° per minute and the hour hand 0.5° per minute. The angle is $|30H - 5.5M|$.

Step 1 — Substitute $H = 5,\ M = 15$:

$$|30 \times 5 - 5.5 \times 15| = |150 - 82.5| = 67.5^\circ.$$

Step 2 — Check by hands: At $5{:}15$ the minute hand is at 3 (90°) and the hour hand a quarter past 5, i.e. at 157.5°; the gap is $157.5 - 90 = 67.5^\circ$.

Why other options are wrong:

- (A) 60° ignores the hour hand's drift; (B) 75° and (D) 90° use wrong hand positions.

Final Answer: The angle is $67.5^\circ \Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q25

Q26.

Solution

Concept — Odd one out by pattern: Test the numbers against a common rule such as "is a perfect square."

Step 1 — Check for perfect squares: $16 = 4^2$, $36 = 6^2$, $64 = 8^2$, $81 = 9^2$ are all perfect squares. But 30 is not a perfect square (it lies between $5^2 = 25$ and $6^2 = 36$).

Step 2 — Identify the misfit: 30 breaks the "perfect square" pattern.

Why other options are wrong:

- (A) $16 = 4^2$, (B) $64 = 8^2$, (C) $81 = 9^2$ are all genuine perfect squares.

Final Answer: The odd one out is $30 \Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q26

Q27.

Solution

Concept — Synonyms: A synonym has the same meaning. "Robust" means strong and sturdy.

Step 1 — Match the meaning: "Robust" (as in a robust structure) means strong and tough, so its synonym is **Sturdy**.

Why other options are wrong:

- (A) Fragile is the opposite (an antonym); (C) Hollow and (D) Faded are unrelated to strength.

Final Answer: ROBUST means Sturdy $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q27

Q28.

Solution

Concept — Verbal analogy: Find the relationship in the first pair, then apply the same relation.

Step 1 — First pair: A sculptor creates a statue; "maker $\rightarrow$ thing made."

Step 2 — Apply it: A composer creates a **Symphony**, matching "maker $\rightarrow$ thing made."

Why other options are wrong:

- (A) Orchestra performs the work but is not created by the composer; (B) Audience listens; (D) Piano is only an instrument.

Final Answer: Composer is to Symphony $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q28

Q29.

Solution

Concept — Sentence completion: Pick the word that fits the positive tone of "admired."

Step 1 — Read the tone: A garden that is admired and guides the eye pleasingly is being complimented, so a positive word is needed.

Step 2 — Best fit: "Harmonious" (well-balanced and pleasing) fits an admired layout.

Why other options are wrong:

- (B) chaotic, (C) barren and (D) gloomy are all negative and clash with "admired."

Final Answer: The garden was admired as "harmonious" $\Rightarrow \boxed{A}$

Answer: (A) Go Back to Q29

Q30.

Solution

Concept — Colour theory: On the artists' (subtractive) colour wheel, secondary colours are made by mixing pairs of primaries.

Step 1 — Recall the secondaries: Mixing the artists' primaries (red, yellow, blue) in pairs gives **Orange, Green and Violet**.

Step 2 — Confirm: Red + yellow = orange, yellow + blue = green, blue + red = violet.

Why other options are wrong:

- (A) red/yellow/blue are the primaries; (B) black/white/grey are neutrals; (C) red/green/blue are the *light* (additive) primaries.

Final Answer: The secondaries are Orange, Green, Violet $\Rightarrow \boxed{D}$

Answer: (D) Go Back to Q30

Q31.

Solution

Concept — Balance in composition: Balance is how visual weight is distributed. When elements radiate evenly from a central point, the balance is radial.

Step 1 — Match the description: Identical petals of planting spreading out equally from a centre give **radial balance**, as in a circular flower bed or a rose window.

Why other options are wrong:

- (A) asymmetrical uses unlike but balanced elements; (C) "no balance" contradicts the even spread; (D) symmetrical balance mirrors two halves about an axis, not around a centre.

Final Answer: Elements radiating from a centre give radial balance $\Rightarrow$ B

Answer: (B) Go Back to Q31

Q32.

Solution

Concept — Natural vs man-made materials: Natural materials are used roughly as found; manufactured ones are produced by processing.

Step 1 — Classify: Glass, steel and brick are all manufactured (by melting sand, smelting iron ore, and firing moulded clay). Granite is a natural rock quarried from the earth.

Step 2 — Odd one out: Granite is the natural material.

Why other options are wrong:

- (A) Glass, (B) Steel and (D) Brick are all man-made.

Final Answer: The natural material is Granite $\Rightarrow$ C

Answer: (C) Go Back to Q32

Q33.

Solution

Concept — Reading a tower's silhouette: The image shows a tall, fluted, tapering tower divided into storeys by projecting balconies, capped by a small domed cupola. This profile is unique to the **Qutub Minar**, the tallest brick minaret in the world.

Step 1 — Match the features: The strong taper from a broad base, the ring-like balconies and the ribbed shaft are the signature of the Qutub Minar, begun by Qutb-ud-din Aibak around 1199 in Delhi.

Why other options are wrong:

- (B) Charminar is a square gateway with four minarets, not a single tower; (C) the Minaret of Jam (Afghanistan) and (D) Fateh Burj (Punjab) are different, less-tapered towers.

Final Answer: The tower is the Qutub Minar $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q33

Q34.

Solution

Concept — Placing a landmark: The silhouette shows a large central onion dome on a raised platform, four detached corner minarets and a tall central arch (iwan). This symmetrical garden-tomb form is the **Taj Mahal**.

Step 1 — Recall the building: It was built by Shah Jahan in memory of Mumtaz Mahal and is faced throughout in white marble.

Step 2 — Its city: The Taj Mahal stands on the bank of the Yamuna in **Agra**, Uttar Pradesh.

Why other options are wrong:

- (A) Delhi has Humayun's Tomb and the Qutub Minar; (C) Lucknow has the Bara Imambara; (D) Jaipur has the Hawa Mahal.

Final Answer: The Taj Mahal is in Agra $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q34

Q35.

Solution

Concept — A four-arched gateway: The figure shows a square structure with a large arch on each side and a slender minaret rising at each of the four corners. This is the **Charminar**, literally "four minarets."

Step 1 — Recall the building: The Charminar was built in 1591 by Muhammad Quli Qutb Shah in the old city of Hyderabad.

Step 2 — Its country: Hyderabad is in Telangana, so the Charminar is located in **India**.

Why other options are wrong:

- (A) Iran, (B) Turkey and (C) Pakistan have their own famous Islamic monuments, but the Charminar is in India.

Final Answer: The Charminar is in India $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q35

Q36.

Solution

Concept — A triumphal-arch memorial: The figure shows a single large free-standing archway with a heavy cornice, in the manner of a Roman triumphal arch. In New Delhi this is the **India Gate**.

Step 1 — Recall the designer: India Gate, completed in 1931, was designed by **Edwin Lutyens**, the British architect who planned much of New Delhi.

Why other options are wrong:

- (A) Charles Correa is a later Indian modernist; (B) Laurie Baker is known for cost-effective Kerala architecture; (D) Herbert Baker designed the nearby Secretariat blocks, not India Gate.

Final Answer: India Gate was designed by Edwin Lutyens $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q36

Q37.

Solution

Concept — A building shaped as a symbol: The figure shows a cluster of curved petal-like shells opening outward like a lotus flower. This is the **Lotus Temple** in New Delhi.

Step 1 — Recall its surface: The Lotus Temple, a Bahá'í House of Worship completed in 1986, is made of 27 free-standing "petals" clad in **white marble** (from Greece).

Why other options are wrong:

- (B) Red sandstone faces Mughal forts, not these petals; (C) a glass curtain wall is a modern office-tower skin; (D) exposed brick is not used on the petals.

Final Answer: The Lotus Temple petals are clad in white marble $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q37

Q38.

Solution

Concept — Architects and their cities: A few planned cities are tied to a single master architect.

Step 1 — Recall the planner: Le Corbusier master-planned **Chandigarh** in the 1950s and designed its Capitol Complex (the Secretariat, High Court and Assembly), now a UNESCO World Heritage Site.

Why other options are wrong:

- (A) Frank Lloyd Wright worked mainly in the USA; (B) Antoni Gaudí worked in Barcelona; (C) Zaha Hadid is a later deconstructivist architect.

Final Answer: Chandigarh was planned by Le Corbusier $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q38

Q39.

Solution

Concept — Indian temple styles: North and South Indian temples are grouped into named regional styles.

Step 1 — Match the feature: A temple with a tall pyramidal gateway tower called a *gopuram*, common in Tamil Nadu (Madurai, Thanjavur), belongs to the **Dravidian** style.

Why other options are wrong:

- (A) Nagara is the North Indian style with a curving shikhara; (C) Gothic is European; (D) Vesara is a Deccan hybrid.

Final Answer: A gopuram-topped South Indian temple is Dravidian $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q39

Q40.

Solution

Concept — Structural terms: Different members are named by how they are supported and how they carry load.

Step 1 — Define the term: A **cantilever** is a beam or slab fixed (supported) at one end only, projecting freely into space, as in a balcony, a diving board or a projecting canopy.

Why other options are wrong:

- (A) Lintel spans over an opening with support at both ends; (B) Plinth is the base of a wall above ground; (D) Arch is a curved member carrying load to two supports.

Final Answer: A beam fixed at one end only is a cantilever $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q40

Q41.

Solution

Concept — Planning abbreviations: Building bye-laws use short forms for key planning ratios.

Step 1 — Expand FAR: FAR stands for **Floor Area Ratio** – the ratio of a building's total built-up floor area to the area of the plot it stands on. It controls how much can be built on a site.

Why other options are wrong:

- (B), (C) and (D) are invented expansions; only "Floor Area Ratio" is the standard meaning in planning.

Final Answer: FAR = Floor Area Ratio $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q41

Q42.

Solution

Concept — Major prizes by field: Certain prizes are the top honour in a single discipline.

Step 1 — Identify the field: The **Aga Khan Award for Architecture**, established in 1977, is given every three years for outstanding building and planning projects, especially those serving Muslim communities.

Why other options are wrong:

- (A) Cinema, (B) Poetry and (C) Sculpture have their own honours, not the Aga Khan Award.

Final Answer: The Aga Khan Award is for architecture $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q42

Q43.

Solution

Concept — Percentage: $x\%$ of a number N is $\frac{x}{100} \times N$. **Step 1 — Compute:**

$$\frac{32}{100} \times 400 = 128.$$

Final Answer: $\Rightarrow \boxed{128}$

Answer: (128) Go Back to Q43

Q44.

Solution

Concept — Area of a rectangle: area $=$ length $\times$ breadth. **Step 1 — Compute:**

$$19 \times 8 = 152 \text{ cm}^2.$$

Final Answer: $\Rightarrow \boxed{152}$

Answer: (152) Go Back to Q44

Q45.

Solution

Concept — Ratio split: the shares are $\frac{3}{8}$ and $\frac{5}{8}$ of the total. **Step 1 — Larger share:**

$$\frac{5}{8} \times 136 = 85.$$

Final Answer: $\Rightarrow \boxed{85}$

Answer: (85) Go Back to Q45

Q46.

Solution

Concept — Compound interest: amount $= P\left(1+\frac{R}{100}\right)^T$. **Step 1 — Compute:**

$$11000 \times (1.1)^2 = 11000 \times 1.21 = 13310.$$

Final Answer: $\Rightarrow \boxed{13310}$

Answer: (13310) Go Back to Q46

Q47.

Solution

Concept — Speed: speed $= \dfrac{\text{distance}}{\text{time}}$. **Step 1 — Compute:**

$$\frac{280}{4} = 70 \text{ km/h}.$$

Final Answer: $\Rightarrow \boxed{70}$

Answer: (70) Go Back to Q47

Q48.

Solution

Concept — Number series: each term is a multiple of 7 ($7 \times 1,\ 7 \times 2, \ldots$). **Step 1 — Next term:**

$$7 \times 6 = 42.$$

Final Answer: $\Rightarrow \boxed{42}$

Answer: (42) Go Back to Q48

Q49.

Solution

Concept — Average: average $= \dfrac{\text{sum}}{\text{count}}$. **Step 1 — Compute:**

$$\frac{340}{5} = 68.$$

Final Answer: $\Rightarrow \boxed{68}$

Answer: (68) Go Back to Q49

Q50.

Solution

Concept — Angle sum of a triangle: the three angles add to 180°. **Step 1 — Compute:**

$$180 - 60 - 70 = 50.$$

Final Answer: $\Rightarrow \boxed{50}$

Answer: (50) Go Back to Q50

Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	B	2	C	3	A	4	C	5	D
6	B	7	A	8	C	9	B	10	D
11	A	12	B	13	C	14	B	15	D
16	A	17	C	18	B	19	D	20	A
21	C	22	B	23	D	24	A	25	C
26	D	27	B	28	C	29	A	30	D
31	B	32	C	33	A	34	B	35	D
36	C	37	A	38	D	39	B	40	C
41	A	42	D	43	128	44	152	45	85
46	13310	47	70	48	42	49	68	50	50