NID DAT

Complete Sample Paper – 2

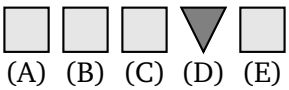
Duration: 150 Minutes **Maximum Marks: 100**

Instructions

- This paper contains **50 Visual MCQs (Part A)** and **5 Drawing Tasks (Part B)**, modelled on NID DAT 2026 Prelims.
- **Part A:** Each correct answer carries $+1$ **mark**. There is **no negative marking**.
- **Part B:** Each drawing task carries **10 marks**; marks are awarded for design thinking, form, composition, and visual communication.
- **Total: 100 marks | Duration: 150 minutes**
- For Part A only one option is correct per question; for Part B all answers are open-ended sketches.
- Drawing tools (pencils, sketch pens, scale, colours) are allowed for Part B only. No electronic gadgets.

Part A: Visual MCQs — 50 Marks

Q1. Which of the following shapes is the **odd one out**? Four shapes belong to the same category; one does not.



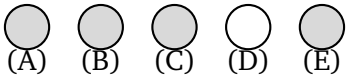
(A) Shape A

(B) Shape B

(C) Shape C

(D) Shape D

Q2. Which shape does **not** share the same visual property as the other four?



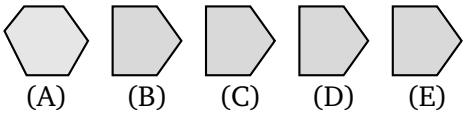
(A) Shape A

(B) Shape B

(C) Shape C

(D) Shape D

Q3. Four of the five figures below have the same number of sides. Identify the **odd one out**.



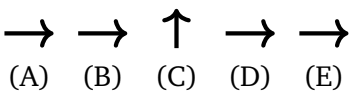
(A) Shape A

(B) Shape B

(C) Shape C

(D) Shape D

Q4. In the set of arrows below, one arrow points in a **different direction** from the rest. Identify it.



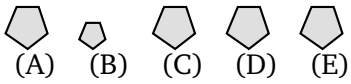
(A) Arrow A

(B) Arrow B

(C) Arrow C

(D) Arrow D

Q5. Four of the five pentagons below are the same size. Which one is **different**?



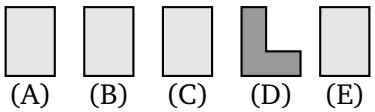
(A) Shape A

(B) Shape B

(C) Shape C

(D) Shape D

Q6. Four of the five figures have a **vertical axis of symmetry**. Which does **not**?



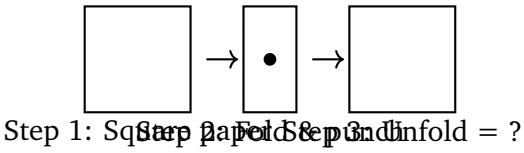
(A) Shape A

(B) Shape B

(C) Shape C

(D) Shape D

Q7. A square sheet of paper is folded along the **vertical centre line** (left half over right). A hole is punched as shown. When fully unfolded, where do the holes appear?



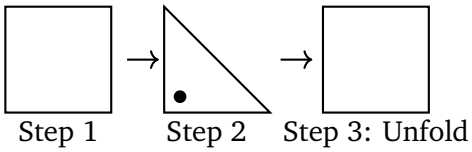
(A) Two holes, symmetrically on left and right of centre

(B) One hole, at the centre

(C) Two holes, both on the right side

(D) Four holes, one in each quadrant

Q8. A square paper is folded **diagonally** (top-left corner to bottom-right corner). A hole is punched near the folded corner. Where do the holes appear when unfolded?



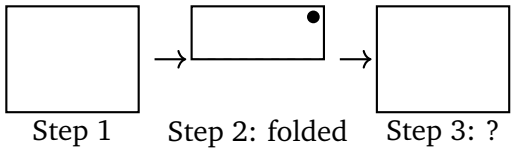
(A) One hole near the top-right corner

(B) Two holes along the vertical centre

(C) Two holes, one near each of two opposite corners, mirrored across the diagonal

(D) Four holes in a square arrangement

Q9. A rectangular sheet is folded so that the **bottom half folds up** over the top half. A hole is punched in the **top-right corner** of the folded sheet. Which option shows the result after unfolding?



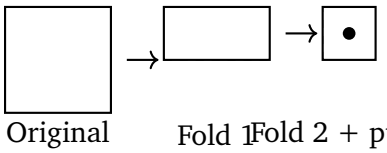
(A) One hole in the top-right corner only

(B) Two holes – one in the top-right and one in the bottom-right, symmetrical about the horizontal fold

(C) Two holes – both in the top half

(D) One hole in the centre of the sheet

Q10. A square sheet is folded **in half horizontally**, then **in half vertically** (quarter fold). A hole is punched at the **centre** of the folded quarter. How many holes appear when fully unfolded, and where?



(A) 1 hole at the exact centre

(B) 2 holes along the horizontal fold line

(C) 2 holes along the vertical fold line

(D) 4 holes, one in each quadrant equidistant from the centre

Q11. A rectangular sheet is folded so the **right one-third** folds over to the left. A hole is punched on the **left** side of the folded portion. When unfolded, where are the holes?

(A) Two holes: one in the left third and one mirrored in the right third of the sheet

(B) One hole in the left third only

(C) Two holes: both in the middle third of the sheet

(D) One hole exactly at the right edge

Q12. A square sheet has its **top-left corner folded down** to meet the bottom-right corner (diagonal fold). A hole is punched at the bottom-left corner of the folded shape. After unfolding, where is (are) the hole(s)?

(A) Two holes along the left edge

(B) One hole at the top-left corner only

(C) Two holes: one at the bottom-left corner and one at the top-right corner of the original sheet

(D) Four holes, one at each corner

Q13. Look at the image below. This is a classic **figure-ground** ambiguous image. Which statement best describes it?

(A) Only a white vase is visible; there is no other interpretation

(B) The white area can be seen as a vase OR the dark areas can be seen as two facing profiles

(C) The black area shows a vase and the white shows a butterfly

(D) The image has three valid figure-ground interpretations

Q14. In a figure-ground reversal image, the **figure** and **ground** can swap. Which principle of Gestalt psychology explains why the brain alternates between two interpretations?

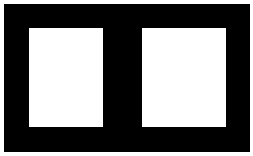
(A) Law of Proximity

(B) Law of Continuity

(C) Law of Similarity

(D) Figure-Ground Segregation (Prägnanz)

Q15. In the image below, which region is most naturally perceived as the **figure** (foreground)?



(A) The two white rectangles, because smaller enclosed shapes are perceived as figure

(B) The black background, because it is larger and surrounds everything

(C) Both regions equally, as the image is perfectly balanced

(D) Neither region – this image has no figure or ground

Q16. Which of the following factors makes a figure-ground relationship **more stable** (less prone to reversal)?

(A) Equal area of figure and ground

(B) High symmetry of both regions

(C) Strong contrast between figure and ground (e.g., dark on light)

(D) Use of curvilinear edges for both regions

Q17. A logo designer deliberately uses figure-ground ambiguity so that the negative space reads as a hidden symbol. Which famous logo is known for this technique?

(A) The Apple logo

(B) The FedEx logo (hidden arrow between “E” and “x”)

(C) The Nike Swoosh

(D) The McDonald’s Golden Arches

Q18. In Gestalt figure-ground theory, the **ground** (background) typically appears to:

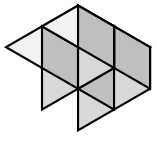
(A) Have a clearly defined shape and boundary

(B) Be perceived as closer to the viewer

(C) Attract the viewer’s gaze more than the figure

(D) Extend continuously behind the figure, with no clearly defined shape

Q19. How many unit cubes are used to build the 3D structure shown below?



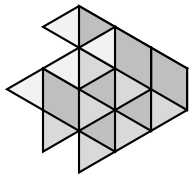
(A) 5

(B) 6

(C) 7

(D) 8

Q20. Count the total number of unit cubes in the structure below (no hidden cubes are present other than those needed to support visible ones).



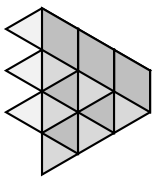
(A) 5

(B) 6

(C) 7

(D) 8

Q21. The figure shows a **staircase** arrangement of cubes. How many cubes in total?



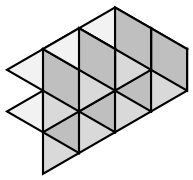
(A) 5

(B) 6

(C) 7

(D) 8

Q22. How many unit cubes make up the T-shaped structure illustrated below?



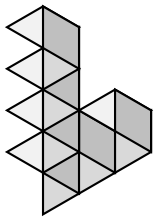
(A) 5

(B) 6

(C) 7

(D) 8

Q23. A 3D arrangement of cubes has 3 cubes in the bottom row, 2 cubes stacked on the leftmost column, and 1 cube on top of that. What is the total cube count?



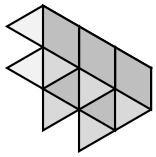
(A) 6

(B) 7

(C) 8

(D) 9

Q24. A 2×2 base layer has one additional cube placed on top of the back-left cube. How many cubes in total?



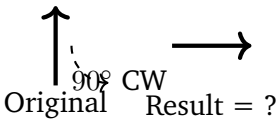
(A) 3

(B) 4

(C) 5

(D) 6

Q25. An arrow points **upward (↑)**. After a **90° clockwise rotation**, the arrow points:



(A) Upward (↑)

(B) Right (→)

(C) Downward (↓)

(D) Left (←)

Q26. A letter "F" is rotated **180°** about its centre. Which option correctly shows the result?

(A) The letter "F" appears unchanged

(B) The letter appears as a mirror "F" (reflected horizontally)

(C) The letter appears as an inverted "F" with the prongs still pointing right

(D) The letter appears upside-down with the prongs pointing left

Q27. A triangular flag shape is shown. Three of the four options below represent the same flag **rotated**; one is a **mirror reflection**. Identify the reflection.

(A) The option where the flag's pointed tip switches from right to left without any tilt change

(B) The option rotated 90° clockwise

(C) The option rotated 180°

(D) The option rotated 270° clockwise

Q28. A cube has a dot on its **top face**. After rotating the cube **90° forward** (tilting away from you), the dot is now on which face?

(A) Top face (unchanged)

(B) Bottom face

(C) Front face

(D) Back face

Q29. An L-shaped piece is rotated **270° clockwise**. This is equivalent to rotating it:

(A) 90° clockwise

(B) 90° anticlockwise

(C) 180°

(D) 360°

Q30. A design element is first rotated **45° clockwise**, then **135° clockwise**. What is the total angle of rotation from the original position?

(A) 45°

(B) 90°

(C) 135°

(D) 180°

Q31. **Madhubani painting** (also called Mithila painting) originates from which Indian state, and what is its most distinctive technique?

(A) Bihar; intricate line work with natural pigments on paper or cloth, depicting mythological themes

(B) Odisha; palm-leaf illustrations of the Jagannath cult

(C) Rajasthan; miniature paintings with gold leaf on cloth

(D) Gujarat; mirror-work embroidery on fabric

Q32. **Warli painting** is a tribal art form from Maharashtra. Its most characteristic feature is the use of:

(A) Intricate floral motifs in bright reds and yellows

(B) Gold outline on dark background

(C) Basic geometric shapes – circles, triangles, and squares – to depict human figures and nature scenes in white on an earthy red or brown background

(D) Elaborate mythological narratives in multi-colour on silk

Q33. **Kalamkari** is a traditional art form practised in Andhra Pradesh. The word "Kalamkari" literally means:

(A) Clay work

(B) Pen craft (kalam = pen; kari = work), referring to hand-drawn or block-printed textile art

(C) Stone carving

(D) Weaving with gold threads

Q34. **Pattachitra** is a classical scroll painting tradition associated with:

(A) West Bengal and Madhubani mythology

(B) Tamil Nadu temple art and Tanjore style

(C) Rajasthan miniature tradition

(D) Odisha and West Bengal, depicting stories of Lord Jagannath and Radha-Krishna

Q35. **Phulkari** is a traditional embroidery craft from Punjab. Which statement best describes it?

(A) Dense floral embroidery ("phul" = flower; "kari" = craft) worked in silk thread on coarse cotton or khadi, often covering the entire surface

(B) Block-printed textile with indigo and madder dyes

(C) Fine silk weaving on a handloom with gold zari

(D) Resist-dyeing technique using wax (batik)

Q36. India has two major centres of hand **block printing** in Rajasthan. Which pair is correct?

(A) Lucknow and Varanasi – known for white-on-white chikan work and brocades

(B) Kutch and Bhuj – known for mirror-work and tie-dye

(C) Sanganer (fine floral motifs on white) and Bagru (earthy tones with resist-printing)

(D) Mysore and Kanchipuram – known for silk weaving

Q37. An **analogous colour scheme** is one where:

(A) Colours are placed directly opposite each other on the colour wheel

(B) Colours sit adjacent to each other on the colour wheel (e.g., red, red-orange, orange)

(C) Three colours are equally spaced 120° apart on the colour wheel

(D) Four colours form a rectangle on the colour wheel

Q38. A **triadic colour scheme** uses three colours:

(A) All from the cool half of the colour wheel

(B) Adjacent to each other (within 30°)

(C) Two complementary pairs

(D) Equally spaced 120° apart on the colour wheel (e.g., red, yellow, blue)

Q39. Which pair is a **complementary colour** combination? (Hint: complementary colours sit opposite each other on the colour wheel.)

Colour wheel (schematic)

(A) Orange and blue

(B) Red and pink

(C) Yellow and yellow-green

(D) Purple and violet

Q40. A **split-complementary** scheme uses:

(A) One colour and its complement only

(B) Three equally spaced colours

(C) One base colour plus the two colours adjacent to its complement

(D) Four colours forming a square on the colour wheel

Q41. A **monochromatic colour scheme** is based on:

(A) Multiple hues in equal saturation

(B) A single hue in varying tints (adding white), shades (adding black), and tones (adding grey)

(C) Complementary pairs of high contrast

(D) Warm colours only (red, orange, yellow)

Q42. A **tetradic (square) colour scheme** uses how many colours, and how are they arranged on the colour wheel?

(A) 3 colours, 120° apart

(B) 2 colours, directly opposite

(C) 2 pairs of complementary colours arranged 60° apart

(D) 4 colours equally spaced 90° apart, forming a square

Q43. In architecture, a **cantilever** is:

(A) A projecting beam or slab anchored at one end and free at the other, with no external support at the free end

(B) A type of arch with a keystone at the top

(C) A Gothic structural element that transfers roof thrust outward

(D) A corbelled bracket supporting a balcony from below

Q44. A **corbel** in traditional masonry architecture is:

(A) A lightweight steel cable used in suspension bridges

(B) A reinforced concrete column embedded in a wall

(C) A stone, brick, or timber bracket projecting from a wall to support a load above (e.g., a beam or balcony)

(D) A type of tensile membrane stretched over a frame

Q45. A **tensile structure** (e.g., a tent or cable-net roof) derives its strength from:

(A) Thick masonry walls in compression

(B) Materials (cables, membranes) that resist loads through tension rather than compression or bending

(C) Rigid concrete frames alone

(D) Post-and-beam timber joinery

Q46. **Vernacular architecture** refers to:

(A) Architecture designed by internationally trained architects using imported materials

(B) Modernist buildings built after 1950

(C) Buildings conforming to the International Style

(D) Indigenous building traditions that use locally available materials and respond to local climate, culture, and craftsmanship

Q47. Which of the following is a key principle of **sustainable architecture**?

(A) Minimising resource consumption, maximising use of renewable materials, and designing for long lifecycle and adaptability

(B) Using exclusively glass and steel for maximum transparency

(C) Replicating historical architectural styles precisely

(D) Prioritising aesthetic novelty over functional efficiency

Q48. **Biophilic design** in architecture is best described as:

(A) Designing buildings that resemble biological organisms in outward form only

(B) Using green paint and plant-themed graphics in interiors

(C) Integrating nature – natural light, plants, water features, natural materials, and views of the outdoors – into the built environment to support human well-being

(D) Constructing buildings entirely from recycled biological waste

Q49. A **flying buttress**, a hallmark of Gothic cathedrals, serves to:

(A) Provide decorative ornamentation along the roofline

(B) Transfer the lateral thrust of the vault or roof to an outer pier, allowing thinner walls and larger windows

(C) Carry electrical conduits hidden within the masonry

(D) Support the altar screen inside the cathedral

Q50. **Passive solar design** uses building orientation and materials to:

(A) Generate electricity using roof-mounted photovoltaic panels

(B) Pump hot water through underfloor pipes using solar collectors

(C) Cool buildings by mechanical refrigeration powered by the sun

(D) Heat and light buildings naturally by capturing, storing, and distributing solar energy without mechanical systems

Part B: Drawing Tasks — 50 Marks

Q51. Poster Design for a City Book Fair

Design a poster in **A4 format** for a city-wide Book Fair. The poster must include:

- A **title** (name the fair, e.g., “Cityscape Book Fair 2026”)

- A **visual motif** – an illustration or graphic element that communicates the theme of books, reading, or literary culture
- A **date and venue placeholder** (e.g., "15–20 March 2026 | Central Park Pavilion")
- Thoughtful **composition** that guides the viewer's eye from title to motif to details

Evaluation criteria: Layout hierarchy, originality of the visual motif, typographic balance, use of white space, and overall visual communication.

Q52. Organic Table Lamp Design

Sketch a **table lamp** whose shade is inspired by a **plant or organic structure** (e.g., a lotus bud, a bird-of-paradise flower, a mushroom cap, a fern frond). Show:

- A clear **front view** (elevation sketch)
- The **base and stem** in proportion to the shade
- A short **material note** beside key parts (e.g., "blown glass", "bent copper wire", "pressed bamboo")
- Indication of **light direction** with hatching or arrows

Evaluation criteria: Innovation of the shade form, botanical/organic reference, constructability, proportion, and annotation quality.

Q53. Tessellating Tile Pattern

Create a **repeating tile pattern** using **exactly two geometric shapes**. Rules:

- The two shapes must **tessellate seamlessly** (no gaps or overlaps)
- Show at least a 3×3 **tile area** (nine or more tiles visible)
- Use **line, tone, or colour fill** to distinguish the two shapes clearly

- Label the two shapes and note any angle or proportion used to achieve the tessellation

Evaluation criteria: Correctness of tessellation, visual rhythm and pattern quality, clarity of the two-shape system, and presentation.

Q54. Bird in 5 Stages — Gesture to Detail

Draw the **same bird species** in five progressive stages on a single page:

Stage 1: Loose **gesture sketch** – 2–3 lines capturing pose and movement

Stage 2: **Basic volumes** – simple ellipses/shapes for body, head, wing

Stage 3: **Silhouette refinement** – clean outline with tail, beak, feet

Stage 4: **Feather texture and tonal shading** added

Stage 5: **Detailed rendering** – full feather detail, eye, and background hint

State the bird species at the top. Use the same pose/angle across all five stages.
Evaluation criteria: Progression clarity, anatomical accuracy, understanding of form and texture, and overall draughtsmanship.

Q55. Café Interior — Bird's-Eye-View Plan

Sketch a **top-view (plan) layout** of a small café approximately **6 m** $\times$ **4 m**. The plan must show:

- **Entry/door** position (at least one)
- **Counter / service bar** area
- **Seating arrangement** – at least four tables with chairs
- Any **structural elements** (walls, columns if any)
- A simple **legend/key** identifying symbols used

No exact scale is required, but proportions should be realistic. Neatness, spatial logic, and clarity of communication are essential.

Evaluation criteria: Spatial organisation, functional flow (entry → counter → seating), use of symbols, legibility, and proportion.

Detailed Solutions

Part A — Visual MCQ Solutions

Q1. **Concept:** Odd-one-out by shape type. All other shapes are rectangles/squares; Shape D is a triangle — a fundamentally different polygon class.
Why others wrong: (A), (B), (C), (E) are all quadrilaterals (rectangles), sharing four right angles and parallel sides.
Why (D): A triangle has three sides; it does not share the quadrilateral property of the group.

Answer: (B) Go Back to Q1

Q2. **Concept:** Odd-one-out by fill property. All circles are filled with grey except Shape D, which has only an outline (no fill).
Why others wrong: (A), (B), (C), (E) are all filled circles — they share the same fill property.
Why (D): Shape D is an unfilled (outline-only) circle — its visual weight is completely different from the filled group.

Answer: (D) Go Back to Q2

Q3. **Concept:** Odd-one-out by number of sides. Shapes B–E are pentagons (5 sides); Shape A is a hexagon (6 sides).
Step 1: Count the vertices/sides of each shape in the figure.
Step 2: Shapes B, C, D, E each have 5 sides. Shape A has 6 sides.
Why (A): The hexagon does not belong to the group of pentagons.

Answer: (A) Go Back to Q3

Q4. **Concept:** Odd-one-out by orientation. Arrows A, B, D, E all point right ($\rightarrow$); Arrow C points upward ($\uparrow$).
Why others wrong: All other arrows lie along the horizontal axis.
Why (C): Arrow C is rotated 90° from the group's common direction.

Answer: (C) Go Back to Q4

Q5. **Concept:** Odd-one-out by size. Four pentagons are drawn at scale 0.45; Shape B is drawn at scale 0.28 — noticeably smaller.
Why others wrong: (A), (C), (D), (E) are all the same size.
Why (B): Shape B is drawn at a smaller scale — its overall dimensions are less than the rest of the group.

Answer: (B) Go Back to Q5

Q6. **Concept:** Odd-one-out by symmetry. Rectangles A, B, C, E each have a vertical axis of symmetry. Shape D is an L-shape, which is asymmetric.
Why others wrong: A rectangle is symmetric about its vertical centre line.
Why (D): The L-shape cannot be divided by any vertical line into two mirror-image halves.

Answer: (D) Go Back to Q6

Q7. **Concept:** Paper folding symmetry. When the left half is folded over the right and a hole is punched through both layers, unfolding reveals two holes mirrored about the fold line.
Step 1: The hole is punched at the centre of the folded half, which is $\frac{1}{4}$ and $\frac{3}{4}$ of the full width.
Step 2: Unfolding produces two symmetric holes — one on the left side and one on the right side of the centre fold.
Why other options wrong: (B) ignores the fact that folding doubles the layers; (C) assumes the paper stays on one side; (D) would require two perpendicular folds.

Answer: (A) Go Back to Q7

Q8. **Concept:** Diagonal fold symmetry. Folding along the diagonal and punching near the folded corner produces two holes mirrored across the diagonal.
Step 1: The fold axis is the diagonal from top-left to bottom-right.
Step 2: The hole near the bottom-left corner, when reflected across the diagonal, maps to the top-right corner.
Why (C): Two holes appear — one near the bottom-left and its mirror image near the top-right, each equidistant from the diagonal fold.

Answer: (C) Go Back to Q8

Q9. **Concept:** Horizontal fold. Folding the bottom half up means the sheet now has two layers. A hole punched in the top-right of the folded sheet goes through both the top layer (top-right of original) and the bottom layer (bottom-right of original, now folded up).
Step 1: Identify the fold line: horizontal centre.
Step 2: A hole at the top-right of the folded sheet corresponds to the top-right corner of the original; by symmetry about the horizontal fold it also appears at the bottom-right corner.
Why (B): Two holes appear — one in the top-right and one in the bottom-right, symmetrical about the horizontal fold line.

Answer: (B) Go Back to Q9

Q10. **Concept:** Quarter fold. Folding in half horizontally and then in half vertically creates 4 layers. A hole through all 4 layers unfolds to reveal 4 holes, one in each quadrant.
Step 1: First fold (horizontal) — 2 layers. Second fold (vertical) — 4 layers.
Step 2: Hole punched at the centre of the quarter = equidistant from both fold lines. When unfolded, this point maps to 4 symmetric locations — one per quadrant.
Why (D): Four holes appear, one in each quadrant, equidistant from the centre.

Answer: (D) Go Back to Q10

Q11. **Concept:** Folding the right third over the left creates two layers in the right portion. A hole punched through these two layers reveals one hole in the left third and one mirrored hole in the right third.
Step 1: The right one-third folds onto the left. The folded edge sits at the $\frac{2}{3}$ mark from the left.
Step 2: A hole punched on the left side of the folded portion goes through two layers — left-third (original position) and right-third (the folded-over part).
Why (A): Two symmetric holes result — one in the left third and one in the right third.

Answer: (A) Go Back to Q11

Q12. **Concept:** Diagonal fold (top-left corner to bottom-right corner). The fold axis is the main diagonal. A hole at the bottom-left corner of the folded triangle, when reflected across the diagonal, lands at the top-right corner of the original square.
Step 1: Map the bottom-left point across the diagonal: $(0,0) \to (0,0)$ on the fold axis? Actually the fold takes the top-left corner $(0,1)$ to the bottom-right $(1,0)$; the fold axis is the main diagonal. Reflecting $(0,0)$ across the diagonal $y = x$ gives $(0,0)$ — but the hole is at the *bottom-left corner of the folded shape*, which is actually the bottom-right corner $(1,0)$ of the original, whose reflection across the diagonal $y = x$ is $(0,1)$, the top-left. Re-reading: the hole is at the bottom-left corner of the folded shape (the triangle), which maps to two points on the original square.
Step 2: The bottom-left corner of the folded triangle corresponds to both the bottom-left corner and, after unfolding, the top-right corner of the original square.
Why (C): Two holes appear — one at the bottom-left and one at the top-right corner of the original sheet.

Answer: (C) Go Back to Q12

Q13. **Concept:** Rubin's vase is the classic demonstration of figure-ground ambiguity in Gestalt psychology. The same image can be perceived as either a white vase (figure = white shape) or two black facial profiles facing each other (figure = black shapes).
Why (A) wrong: Limiting interpretation to only a vase ignores the profile interpretation.
Why (C) wrong: There is no butterfly shape present.
Why (D) wrong: Exactly two interpretations are classical, not three.
Why (B): Correctly describes both valid figure-ground interpretations.

Answer: (B) Go Back to Q13

Q14. **Concept:** The Gestalt principle most directly responsible for figure-ground alternation is **Figure-Ground Segregation**, often described under the umbrella of Prägnanz (Law of Good Form / simplicity). The brain seeks the simplest, most stable interpretation — but when two equally "good" interpretations exist, it alternates.
Why (A) wrong: Proximity deals with elements being grouped because they are close together.
Why (B) wrong: Continuity concerns smooth curves and paths.
Why (C) wrong: Similarity groups elements that look alike.
Why (D): Figure-Ground Segregation (part of Prägnanz) is the specific principle at work.

Answer: (D) Go Back to Q14

Q15. **Concept:** The Gestalt principle of *surroundedness* (enclosure) states that smaller, enclosed areas tend to be perceived as figure, while the larger surrounding area is the ground.
Step 1: The image has a large black field and two smaller white rectangles.
Step 2: The white rectangles are enclosed by the black field — they are perceived as figure.
Why (A): Smaller enclosed shapes (the white rectangles) are naturally perceived as figure.

Answer: (A) Go Back to Q15

Q16. **Concept:** A stable figure-ground relationship is achieved primarily through **high contrast** between the two regions. Strong contrast in value (light vs dark) makes the brain clearly

assign one region as figure and the other as ground, reducing ambiguity and reversal.
Why (A) wrong: Equal area often promotes instability (equal "candidacy" for figure).
Why (B) wrong: Symmetric ground can itself become a candidate for figure.
Why (D) wrong: Curvilinear edges on both regions can increase ambiguity.
Why (C): Strong luminance contrast clearly distinguishes figure from ground.

Answer: (C) Go Back to Q16

Q17. **Concept:** The FedEx logo is the most celebrated example of intentional figure-ground ambiguity in logo design. The negative space between the uppercase "E" and the lowercase "x" forms a rightward-pointing arrow, symbolising forward motion and precision.
Why (A) wrong: The Apple logo uses a bitten apple silhouette but not figure-ground ambiguity.
Why (C) wrong: The Nike Swoosh is a simple curved tick mark.
Why (D) wrong: The Golden Arches form an "M" but not negative-space ambiguity.

Answer: (B) Go Back to Q17

Q18. **Concept:** In Gestalt figure-ground theory, the ground is the region perceived as continuous surface behind the figure. It does not have a clearly defined shape — it appears to extend behind and beyond the figure.
Why (A) wrong: Clearly defined boundaries are a property of the *figure*, not the ground.
Why (B) wrong: The figure, not the ground, appears closer.
Why (C) wrong: The figure attracts gaze; the ground is visually passive.
Why (D): The ground extends continuously behind the figure without a self-contained shape.

Answer: (D) Go Back to Q18

Q19. **Concept:** Block counting by enumeration. The TikZ figure explicitly lists the following cube coordinates: $(0,0,0)$, $(1,0,0)$, $(0,1,0)$, $(0,0,1)$, $(1,0,1)$ — five distinct unit cubes.
Step 1: List all coordinates: 5 pairs given.
Step 2: No hidden supporting cubes are required since the arrangement is self-supporting at those positions.
Answer: 5 cubes.

Answer: (A) Go Back to Q19

Q20. **Concept:** Block counting. The L-shaped figure uses coordinates: $(0,0,0)$, $(1,0,0)$, $(2,0,0)$, $(0,0,1)$, $(0,1,0)$, $(0,2,0)$, $(1,1,0)$ — seven distinct unit cubes.
Step 1: Count: 3 along x-axis ground row + 1 in z-direction + 2 more stacked vertically + 1 extra = 7.
Answer: 7 cubes.

Answer: (C) Go Back to Q20

Q21. **Concept:** Staircase block count. Coordinates: $(0,0,0)$, $(1,0,0)$, $(2,0,0)$ (bottom row of 3), $(0,1,0)$, $(1,1,0)$ (second step of 2), $(0,2,0)$ (top step of 1). Total = 3+2+1 = 6.
Answer: 6 cubes.

Answer: (B) Go Back to Q21

Q22. **Concept:** T-shaped block count. Coordinates given: $(0,0,0)$, $(1,0,0)$, $(2,0,0)$, $(3,0,0)$ (base row of 4), $(1,1,0)$, $(2,1,0)$ (crossbar of 2), $(1,0,1)$, $(2,0,1)$ (depth cubes of 2). Total = 4+2+2 = 8.
Answer: 8 cubes.

Answer: (D) Go Back to Q22

Q23. **Concept:** Verbal block counting. Bottom row: 3 cubes. Leftmost column has 2 additional cubes stacked (making it 3 tall). One more on top of that column: a total of 3+1 = 4 in the left column, but 3 in the bottom row already includes the base of the left column.
Recount: Bottom row = 3. Above the leftmost of those: 2 more (levels 2 and 3). Above those: 1 more (level 4). But the question says "2 cubes stacked on the leftmost column" then "1 cube on top of that." So leftmost column height = 1 (base) + 2 + 1 = 4? Re-reading: "3 cubes in the bottom row, 2 cubes stacked on the leftmost column, and 1 cube on top of that." The 2 stacked cubes are *additional* to the base, then 1 more on top of those 2. So leftmost column total = 1+2+1 = 4. Other bottom cubes = 2. Total = 4+2 = 6.
Answer: 6 cubes.

Answer: (A) Go Back to Q23

Q24. **Concept:** 2×2 base = 4 cubes + 1 cube on top = 5 total.
Answer: 5 cubes.

Answer: (C) Go Back to Q24

Q25. **Concept:** Spatial rotation of direction. A clockwise rotation turns each direction 90° in the direction: $\uparrow \rightarrow \rightarrow \rightarrow \downarrow \rightarrow \leftarrow \rightarrow \uparrow$.
Step 1: Arrow starts pointing up ($\uparrow$).
Step 2: 90° clockwise: $\uparrow$ becomes $\rightarrow$.
Answer: Right ($\rightarrow$).

Answer: (B) Go Back to Q25

Q26. **Concept:** 180° rotation about the centre turns a figure upside-down. The letter "F" has its prongs pointing right and up. After 180°, the base of "F" is at the top, the prongs point downward and to the left.
Why (D): The letter appears upside-down with its prongs now pointing left (the original right side has rotated to the left).

Answer: (D) Go Back to Q26

Q27. **Concept:** Distinguishing rotation from reflection. A reflection (mirror image) changes handedness — it cannot be achieved by any rotation in the plane. For a triangular flag, a reflection would switch the pointed tip from right to left while the vertical axis remains the same (no tilt).
Why (A): Switching the tip from right to left without any tilt corresponds to a horizontal mirror reflection, not a rotation.

Answer: (A) Go Back to Q27

Q28. **Concept:** 3D cube rotation. "90° forward" means tilting the cube away from the viewer: the top face rotates to become the front face.
Mnemonic: Think of tipping a cube forward on its front bottom edge: the top face sweeps down to become the face pointing toward you (front face).
Answer: Front face.

Answer: (C) Go Back to Q28

Q29. **Concept:** Equivalent rotations. $270°$ clockwise $= 360° - 270° = 90°$ anticlockwise (the "short way around" in the opposite direction).
Answer: $90°$ anticlockwise.

Answer: (B) Go Back to Q29

Q30. **Concept:** Combining rotations. Rotations in the same direction add: $45° + 135° = 180°$ clockwise total.
Answer: $180°$.

Answer: (D) Go Back to Q30

Q31. **Concept:** Madhubani/Mithila painting origin and technique. It comes from the Mithila region of Bihar. Artists use natural pigments (turmeric, indigo, vermillion, lamp-black) applied with fine brushes or fingers onto paper, cloth, or mud walls. Themes are predominantly mythological (Ramayana, Krishna Leela) and ritual.
Why other options wrong: (B) describes Pattachitra/Palm-leaf; (C) describes Rajput or Mughal miniature; (D) describes Kutchi embroidery/textile.

Answer: (A) Go Back to Q31

Q32. **Concept:** Warli painting is practised by the Warli tribe of the Sahyadri range (Maharashtra–Gujarat border). It uses white rice-flour paste on earthy brown or red walls (or paper). Figures are built from circles (head), triangles (body), and rectangles/lines (limbs). Themes: daily life, harvest festivals, hunting.
Why (C): The geometric vocabulary (circle + triangle + square) and monochrome white-on-earth palette are definitive.

Answer: (C) Go Back to Q32

Q33. **Concept:** Etymology of "Kalamkari": *kalam* (Persian: pen/brush) + *kari* (work/craft). The art involves hand-painting or block-printing cotton fabric using natural dyes. Two regional styles: Srikalahasti (hand-drawn, narrative mythological scenes) and Machilipatnam (block-printed, more geometric).
Why (B): The name literally means pen craft, confirming the hand-drawn (or block) textile tradition.

Answer: (B) Go Back to Q33

Q34. **Concept:** Pattachitra (*patta* = cloth; *chitra* = picture) is a scroll-painting tradition of Odisha (Raghurajpur village near Puri) and also West Bengal (Pingla, Medinipur). Themes revolve around Lord Jagannath, Radha-Krishna, and other Vaishnava narratives. The style uses natural

stone colours, intricate borders, and stylised figures.
Why (D): Both Odisha and West Bengal are correct centres, with Jagannath and Radha-Krishna themes.

Answer: (D) Go Back to Q34

Q35. **Concept:** Phulkari (*phul* = flower; *kari* = craft) is a folk embroidery tradition of Punjab. It uses brightly coloured silk (pat) thread on coarse hand-spun cotton (khaddar) fabric using a long-and-short darning stitch from the wrong side. The embroidery can be sparse (Phulkari) or densely packed to cover the entire ground (Bagh). Motifs: flowers, geometric patterns, daily-life scenes.
Why (A): Dense floral embroidery in silk thread on coarse cotton is the definitive description.

Answer: (A) Go Back to Q35

Q36. **Concept:** Rajasthan block printing centres: **Sanganer** (near Jaipur) is known for fine floral/geometric patterns on white or pastel backgrounds using vegetable and synthetic dyes. **Bagru** (also near Jaipur) uses resist-printing (dabu) technique with earthy indigo and madder tones on natural-coloured cloth.
Why (C): The Sanganer (fine floral) and Bagru (earthy resist-printed) pair is the correct Rajasthan block-printing distinction.

Answer: (C) Go Back to Q36

Q37. **Concept:** Analogous colours are those that lie adjacent to each other on the colour wheel, typically spanning about 30–90°. They create harmonious, low-contrast schemes (e.g., red, red-orange, orange; or blue, blue-green, green).
Why (A) wrong: That describes a *complementary* scheme.
Why (C) wrong: 120° spacing describes a *triadic* scheme.
Why (D) wrong: A rectangle on the wheel describes a *tetradic/square* scheme.

Answer: (B) Go Back to Q37

Q38. **Concept:** Triadic: three colours equally spaced 120° apart on the 12-step colour wheel. Primary triad: red, yellow, blue. Secondary triad: orange, green, violet.
Why (D): Equal 120° spacing is the defining criterion.

Answer: (D) Go Back to Q38

Q39. **Concept:** Complementary colours are directly opposite each other on the colour wheel (180° apart). Orange (a secondary colour = red+yellow) sits opposite blue on the traditional RYB wheel.
Why (A): Orange and blue are complementary — they maximise contrast and vibrate when placed side by side.

Answer: (A) Go Back to Q39

Q40. **Concept:** Split-complementary: choose a base colour, find its complement, then take the two colours *adjacent* to that complement (one on each side, typically 30° away). This gives high contrast like complementary but is less jarring.

Why (C): One base colour plus the two flanking its complement — this is the textbook definition.

Answer: (C) **Go Back to Q40**

Q41. **Concept:** Monochromatic: single hue varied through *tints* (hue + white), *shades* (hue + black), and *tones* (hue + grey). The scheme is cohesive and restful because only one hue is used.
Why (B): A single hue in varying tints, shades, and tones — precisely monochromatic.

Answer: (B) **Go Back to Q41**

Q42. **Concept:** Tetradic (square) scheme: four colours equally spaced 90° apart on the colour wheel, forming a square. Example: red, yellow, green, blue (on a 12-step RYB wheel).
Why (D): Four colours at 90° intervals forming a square — the definition of the tetradic/square scheme.

Answer: (D) **Go Back to Q42**

Q43. **Concept:** A cantilever is a structural member (beam, slab, or truss) that is anchored at one end (fixed support) and projects outward without any support at the free end. It relies on bending resistance at the fixed end.
Famous examples: Fallingwater (Frank Lloyd Wright), the overhanging floors of many modernist buildings, diving boards.
Why (A): "Projecting beam anchored at one end, free at the other" is the canonical definition.

Answer: (A) **Go Back to Q43**

Q44. **Concept:** A corbel is a structural piece of stone, brick, wood, or metal jutting out of a wall to carry a load above it (corbelling). It is a simple bracket that transfers a load via cantilever action, but embedded in the wall by its mass. Common in Romanesque and Gothic architecture.
Why (C): "Projecting bracket from a wall to support a load above" — the precise definition.

Answer: (C) **Go Back to Q44**

Q45. **Concept:** Tensile structures work on the principle that materials (cables, high-strength fabric/membrane) are prestressed in tension. They carry loads through tension, not compression or bending, allowing very large spans with minimal material. Examples: Munich Olympic Stadium (Frei Otto), Denver Airport PTFE fabric roof.
Why (B): Resisting loads through tension (cables and membranes) is the defining structural principle.

Answer: (B) **Go Back to Q45**

Q46. **Concept:** Vernacular architecture refers to building traditions that are indigenous to a specific place — using locally available materials (mud, stone, bamboo, timber), responding to local climate, and built by local craftspeople without formal architectural training. It encompasses regional house forms like stepwells, courtyard houses, cliff dwellings, and stilt houses.
Why (D): Indigenous building with local materials and climate-responsive design — the standard definition.

Answer: (D) Go Back to Q46

Q47. **Concept:** Sustainable architecture (also "green architecture") integrates principles of reducing energy consumption, minimising waste, using renewable/recycled materials, designing for adaptability and longevity, and integrating building with its ecosystem. Common certifications: LEED, GRIHA (India), BREEAM.
Why (A): Minimising resource consumption + renewable materials + lifecycle design is the core trifecta of sustainability.

Answer: (A) Go Back to Q47

Q48. **Concept:** Biophilic design is an approach that seeks to connect building occupants more closely with nature. It integrates natural light, ventilation, water, plants, natural materials (wood, stone), and views of the outdoors into architectural spaces. Research shows it reduces stress, improves productivity, and enhances well-being.
Why (C): Integrating actual nature (light, plants, water, materials) into the built environment for well-being — the comprehensive definition.

Answer: (C) Go Back to Q48

Q49. **Concept:** A flying buttress is an arched stone structure that carries the lateral thrust generated by a heavy Gothic vault away from the main wall to an outer pier (buttress pier). This allowed walls to be made thinner, replaced by large stained-glass windows — a defining feature of Gothic cathedrals (Notre-Dame de Paris, Chartres).
Why (B): Transferring lateral vault thrust to an outer pier — precisely the structural function of a flying buttress.

Answer: (B) Go Back to Q49

Q50. **Concept:** Passive solar design uses the building's orientation, thermal mass, insulation, and glazing to capture, store, and distribute the sun's heat and light without any mechanical systems. Key strategies: south-facing glazing (in the northern hemisphere), thermal mass floors/walls, overhangs calibrated for summer shading/winter gain, and natural ventilation.
Why (D): Heating and lighting *naturally* (no mechanical systems) by capturing and distributing solar energy — the definition of passive solar.

Answer: (D) Go Back to Q50

Part B — Drawing Task Model Answers

Q51. Model Answer — Book Fair Poster (Q51)

A strong response will demonstrate a clear **visual hierarchy**: the fair title (large, bold, at the top or centre) commands attention first, followed by the central visual motif (e.g., an open book whose pages fan out into a cityscape, or stacked books forming a skyline), and finally the date/venue information in a smaller but legible band at the bottom. Key assessment points:

- **Composition:** Is there a clear reading path? Does the layout use alignment, contrast, and whitespace effectively?

- **Motif originality:** Is the visual metaphor for "books" or "reading" fresh and specific, or generic?
- **Typography:** Are font sizes hierarchical? Is text readable at a glance?
- **Completeness:** All three required elements (title, motif, date/venue) must be present.

Marks allocation (10): Composition and hierarchy [3], motif originality and execution [3], typographic balance [2], completeness of required elements [2].

Q52. Model Answer — Organic Table Lamp (Q52)

A strong response will show a lamp shade that is unmistakably **derived from a plant form** — identifiable species or structure should be evident (e.g., the layered bracts of an artichoke, the fluted cap of a morel mushroom, the unfurling frond of a fern). The base should feel grounded and proportionate. Material notes should be specific and constructable (not just "wood" but "bent steam-formed plywood" or "hand-blown opal glass"). Light direction can be shown with soft radial hatching emanating downward and outward from the shade opening. Key assessment points:

- **Botanical/organic reference:** Is the source plant form recognisable and creatively interpreted?
- **Proportion:** Is the shade-to-base ratio aesthetically balanced?
- **Constructability:** Do the material notes suggest a feasible object?
- **Drawing quality:** Clean outlines, confident hatching, legible annotations.

Marks allocation (10): Shade form innovation and organic reference [4], proportion and overall design [2], material annotation [2], drawing quality [2].

Q53. Model Answer — Tessellating Tile Pattern (Q53)

A strong response will use two shapes that tessellate by design — e.g., equilateral triangles + regular hexagons (3.6.3.6 Archimedean tiling), squares + octagons (4.8^2 tiling), or a custom pair (a parallelogram + a mirrored parallelogram). The 3×3 tile area must be drawn precisely enough that the tessellation is convincing. Differentiation between the two shapes should be clear through contrasting tones or hatching. Key assessment points:

- **Correctness:** Do the tiles truly tessellate with no gaps or overlaps?
- **Clarity:** Are the two shapes visually distinct?
- **Area:** Is at least a 3×3 tile area shown?
- **Label/annotation:** Are the shapes identified and any key angles/proportions noted?

Marks allocation (10): Tessellation correctness [4], visual rhythm and pattern quality [2], differentiation of shapes [2], completeness of area and annotation [2].

Q54. Model Answer — Bird in 5 Stages (Q54)

A strong response will show a clear **progressive refinement** of the same bird (e.g., a kingfisher, myna, peacock, or sparrow). Stage 1 should be very loose — just 2–3 gestural strokes capturing the bird's attitude (head tilt, wing spread, perch or flight). By Stage 5 the same pose should

be rendered with individual feather groups, eye detail, beak form, feet, and a tonal range from light to dark. Key assessment points:

- **Progression clarity:** Is there a clear visual step-up from each stage to the next?
- **Anatomical accuracy:** Does the bird look like the stated species by Stage 4–5?
- **Consistency:** Is the same pose maintained across all five stages?
- **Draughtsmanship:** Line confidence, tonal control, texture rendering.

Marks allocation (10): Progression clarity [3], anatomical accuracy [3], consistency of pose [2], draughtsmanship [2].

Q55. Model Answer — Café Interior Plan (Q55)

A strong response will show a plan that is spatially logical: the entry is accessible and leads naturally to the counter/service bar; seating is distributed to maximise capacity while maintaining circulation paths ($\geq$900 mm wide). A legend/key identifies door, table, chair, counter, and structural wall symbols. Proportions should approximate the stated 6 m$\times$4 m footprint. Key assessment points:

- **Spatial organisation:** Does the layout make functional sense (entry $\rightarrow$ order $\rightarrow$ sit)?
- **Functional completeness:** Entry, counter, and seating (at least 4 tables) all present?
- **Circulation:** Are aisles clearly implied between furniture?
- **Legibility:** Are symbols clear and is a legend provided?

Marks allocation (10): Spatial organisation and functional flow [4], completeness of required elements [2], circulation logic [2], legibility and legend [2].

Answer Key (Part A — Visual MCQs)

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