

NID DAT

Complete Sample Paper – 6

Duration: 150 Minutes

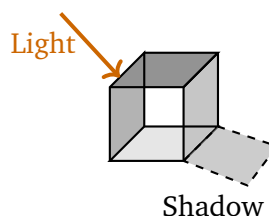
Maximum Marks: 100

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

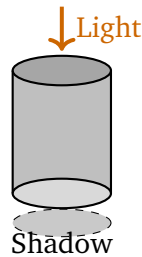
Q1. A solid cube is placed on a flat surface. A light source shines from the **top-left** direction. Which of the four options correctly shows the shadow cast by the cube on the ground plane?



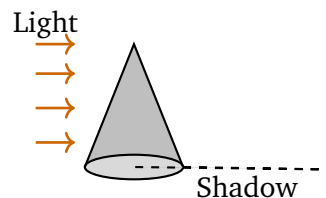
- (A) Shadow falls directly below the cube (a square outline)
- (B) Shadow falls to the top-right
- (C) Shadow falls to the bottom-right (as shown)
- (D) No shadow is cast on the ground



- Q2.** A solid cylinder stands upright on a flat surface. A point light source is placed **directly above** the cylinder's central axis. Which option correctly describes the shadow on the ground plane?

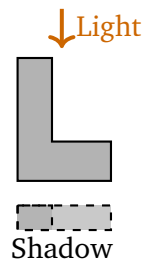


- (A) An elongated ellipse stretched to one side
 - (B) A rectangle matching the cylinder's width
 - (C) A triangle pointing away from the light
 - (D) A circle (or circular ellipse) directly beneath the cylinder
- Q3.** A cone rests with its base on the ground. Light shines from the **left side**, parallel to the ground. Which shadow shape does the cone cast on the ground to its right?



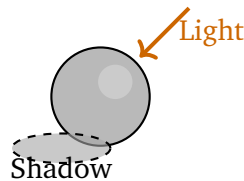
- (A) An elongated triangle on the ground to the right
 - (B) A perfect circle on the ground
 - (C) A rectangle matching the cone's height
 - (D) A crescent shape
- Q4.** An L-shaped flat object stands vertically. A light source shines from **directly above**. Which option shows the correct shadow cast on the ground below the L-shape?





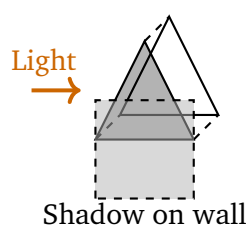
- (A) A single tall rectangle
- (B) An L-shaped shadow on the ground directly beneath
- (C) A T-shaped shadow
- (D) A circular shadow

Q5. A sphere sits on a flat surface. Light comes from **45° upper-right**. Which option correctly shows the shadow cast on the ground?



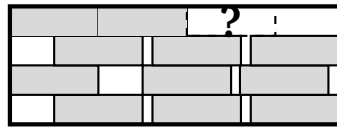
- (A) A perfect circle directly beneath the sphere
- (B) A very long thin line
- (C) An ellipse offset toward the lower-left
- (D) A square shadow

Q6. A triangular prism (with a triangular cross-section and rectangular faces) rests on one of its rectangular faces. Light shines from **directly in front** (perpendicular to the triangular face). Which shape does the shadow cast on the wall behind the prism?



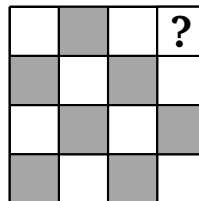
- (A) A triangle (matching the front face)
- (B) A circle
- (C) A hexagon
- (D) A rectangle (the bounding box of the prism's silhouette)

Q7. The pattern below shows an offset **brick-wall** tiling where each row is shifted by half a brick width. Which piece (A–D) correctly continues the pattern at the **top-right corner** marked ??



- (A) A full-width brick in the same grey fill, aligned with the offset row
- (B) A half-brick shifted to the right
- (C) An empty (white) cell
- (D) A brick oriented vertically

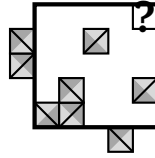
Q8. The grid below has **diagonal stripes** alternating between dark and light bands. Which option fills the **missing cell** (marked ?) correctly?



- (A) A light (white) cell
- (B) A dark (grey) cell
- (C) A half-dark, half-light cell
- (D) A cell with a diagonal line through it

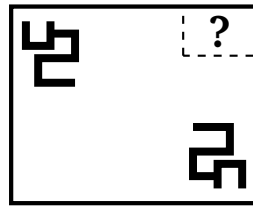
Q9. The pattern shows **pinwheel tiles**: each tile has four right-triangle quadrants arranged to form a pinwheel. Moving across each row, the pinwheel rotates by **90°** clockwise. Which option correctly fills the **top-right** cell (marked ??)?





- (A) Pinwheel rotated 90° (same as bottom-left cell)
- (B) Pinwheel at 180° rotation
- (C) Pinwheel rotated $360^\circ/0^\circ$ (same as bottom-right of row 1, column 1)
- (D) A plain grey square (no pinwheel)

Q10. The border below shows a **Greek key (meander)** pattern. One corner segment is missing (marked ?). Which of the four options correctly completes that corner?



- (A) A plain straight line (no turns)
- (B) A circular spiral
- (C) A diagonal zigzag
- (D) A meander segment that mirrors the top-left corner

Q11. The diagram below shows a **diamond lattice** where diamonds at alternate positions are filled dark and left white. The missing diamond (marked ?) should be:

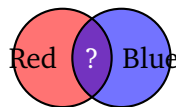
- (A) Dark (filled), because it occupies an alternating position that requires dark fill
- (B) White (empty), because all corner positions are white
- (C) Grey (50% fill), to create a gradient effect
- (D) Striped diagonally



Q12. A **herringbone parquet** floor pattern alternates planks at 45° and 135° angles in a V-shaped zigzag. The missing plank in the gap should be oriented at:

- (A) 0° (horizontal)
- (B) 135° (to continue the herringbone zigzag correctly)
- (C) 90° (vertical)
- (D) 45° (same angle as the adjacent plank, creating a parallel band instead of a zigzag)

Q13. Two transparent circles overlap as shown: one is **red** and the other is **blue**. Both are semi-transparent (like coloured cellophane). What colour appears in the **overlapping intersection** area?



- (A) Green
- (B) Yellow
- (C) Purple / Violet
- (D) Orange

Q14. Two transparent rectangles overlap. One is **yellow** and the other is **cyan**. In the overlapping region, which colour appears (subtractive mixing, as with transparent coloured films)?



- (A) Red
- (B) Blue
- (C) Orange
- (D) Green



- Q15.** In **subtractive** colour mixing (as used in printing with pigments), **Cyan** + **Magenta** produces:
- (A) Blue (or violet-blue)
 - (B) Green
 - (C) Yellow
 - (D) Red
- Q16.** In **additive** colour mixing (light), **Green light** + **Red light** produces:
- (A) Blue
 - (B) Yellow
 - (C) Cyan
 - (D) Magenta
- Q17.** When **all three primary light colours** (Red, Green, and Blue) overlap completely in additive mixing, the result is:
- (A) Black
 - (B) Grey
 - (C) White
 - (D) Brown
- Q18.** In a **CMYK printing process**, which combination of ink values produces the **deepest, richest black** (often called “rich black”)?
- (A) K (black) at 100% only
 - (B) C100 + M0 + Y0 + K0
 - (C) C0 + M100 + Y100 + K0
 - (D) C60 + M40 + Y40 + K100 (all four channels combined)
- Q19.** In **Hinduism**, which colour is associated with **knowledge, purity, and renunciation** and is traditionally worn by saints and ascetics (sanyasis)?



- (A) Saffron / Ochre (Bhagwa)
- (B) Green
- (C) White
- (D) Red

Q20. The traditional **Sambalpuri ikat** weaving of Odisha is most characterised by which **base colour combination**?

- (A) Black and gold on a white base
- (B) Rich red/maroon and black on a natural-white or off-white base
- (C) Pastel blue and pink
- (D) Indigo and saffron stripes

Q21. In **Chinese culture**, the colour **red** is primarily a symbol of:

- (A) Mourning and death
- (B) Royalty and power
- (C) Good luck, happiness, and prosperity
- (D) Wisdom and age

Q22. **Pantone's Colour of the Year 2023**, "Viva Magenta" (Pantone 18-1750), belongs to which colour family?

- (A) Orange-yellow
- (B) Teal-green
- (C) Violet-purple
- (D) Crimson-red / warm red family

Q23. In **Islamic architecture**, blue and turquoise tiles are extensively used in mosques and palaces because blue symbolises:

- (A) Heaven, the divine, and eternal life
- (B) The earth and fertility



- (C) Mourning and grief
- (D) Royalty restricted to rulers

Q24. Which colour **dominates** traditional **Rajasthani bandhani** (tie-dye) textiles as the most prevalent background or accent colour?

- (A) Indigo blue
- (B) Vibrant red, pink, or magenta (the characteristic Rajasthani palette)
- (C) Earthy brown and beige
- (D) Emerald green

Q25. In typography and layout design, a **modular grid** is best described as:

- (A) A single-column layout with wide margins
- (B) A grid that uses only diagonal guide lines
- (C) A grid divided into **both rows and columns**, creating a matrix of uniform rectangular modules (cells) used to organise complex layouts
- (D) A grid based solely on the golden ratio

Q26. In **professional typography**, the term “**leading**” (pronounced “ledding”) specifically refers to:

- (A) The horizontal space between individual letters
- (B) The weight (stroke thickness) of a typeface
- (C) The width of the text column
- (D) The **vertical distance** measured from the baseline of one line of text to the baseline of the line above or below it

Q27. The typeface **Garamond** — characterised by low stroke contrast, angled stress, and **bracketed serifs** — belongs to which historical typeface classification?

- (A) Old Style (Humanist Serif)



- (B) Transitional Serif
- (C) Modern (Didone) Serif
- (D) Slab Serif

Q28. In **digital typography**, “**hinting**” (also called grid-fitting) is a technique that:

- (A) Automatically selects the best typeface for a given purpose
- (B) Adjusts the outlines of letterforms to align with the pixel grid, improving **legibility at small sizes on screen**
- (C) Increases the file size of a font to add more glyphs
- (D) Converts a font from serif to sans-serif automatically

Q29. The “**inverted pyramid**” layout structure in editorial and journalistic design places:

- (A) The least important information at the top, building to the most important
- (B) All information in equal-sized blocks
- (C) Images always at the bottom
- (D) The **most important information at the top**, with decreasing importance toward the bottom

Q30. A **typographic scale** system (such as the classical scale: 6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 21, 24, 36, 48, 60, 72 pt) defines harmonious **type sizes**. Which of the following is **NOT** a property of a typographic scale?

- (A) It creates visual hierarchy through size relationships
- (B) It provides a set of pre-determined harmonious sizes
- (C) It specifies the exact colour values to use for each size of type
- (D) It can be ratio-based (e.g. based on the golden ratio or a major third interval)



- Q31. Charles and Ray Eames** are most celebrated for their pioneering use of which **material** in furniture design during the 1940s–50s?
- (A) Moulded plywood and fibreglass (shell forms)
 - (B) Hand-carved solid teak
 - (C) Cast iron with leather upholstery
 - (D) Woven rattan and bamboo
- Q32.** The iconic “**Ant Chair**” (1952) — a three-legged stacking chair with a continuous moulded plywood seat-and-back — was designed by:
- (A) Alvar Aalto
 - (B) Arne Jacobsen
 - (C) Verner Panton
 - (D) Hans Wegner
- Q33. Marcel Breuer’s “Wassily Chair”** (1925, originally called Model B3) was groundbreaking for its primary structural use of:
- (A) Bent laminated plywood
 - (B) Cast aluminium
 - (C) Fibreglass-reinforced polymer
 - (D) Tubular steel (chrome-plated continuous steel tubing)
- Q34. Alvar Aalto’s** furniture designs — including bent birch plywood chairs, stools, and tables — are most closely associated with which **national design tradition**?
- (A) Danish Modernism
 - (B) Swedish Functionalism
 - (C) Finnish design (Nordic Modernism with natural materials)
 - (D) Dutch De Stijl design



- Q35.** Dieter Rams' approach to furniture and product design is best characterised by:
- (A) Radical simplification, functional honesty, and the principle "Less, but better" (*Weniger, aber besser*)
 - (B) Maximalist ornamentation inspired by Baroque and Rococo
 - (C) Experimental use of recycled and found materials
 - (D) High-gloss surfaces and bold primary colour palettes
- Q36.** The concept of "knock-down" (KD) or flat-pack furniture — where furniture is shipped disassembled and assembled by the customer — primarily addresses which **design concern**?
- (A) Aesthetic appeal and visual richness
 - (B) Efficient logistics, reduced shipping volume, and lower cost (economy of distribution)
 - (C) Maximum structural strength
 - (D) Exclusive use of sustainable timber only
- Q37.** The **rule of thirds** in visual composition recommends placing the **main focal points** of an image at:
- (A) The exact centre of the frame
 - (B) The four corners of the frame
 - (C) Along the top and bottom edges
 - (D) The four **intersection points** created by dividing the frame into a 3×3 grid with two horizontal and two vertical lines
- Q38.** The **golden ratio** ($\phi \approx 1.618$) is most directly applied in design to:
- (A) Determine the number of colours in a palette
 - (B) Calculate the weight of paper stock



- (C) **Establish proportional relationships** between elements — such as the ratio of a headline size to body text, or the width of a column to its margin
- (D) Define the exact pixel dimensions of digital images

Q39. The “**Z-pattern**” describes how viewers naturally scan which type of visual layout?

- (A) Layouts with **sparse text and strong visual elements** (e.g. advertisements, posters, landing pages) where the eye travels: top-left → top-right → diagonal to bottom-left → bottom-right
- (B) Dense, multi-column text layouts such as newspapers
- (C) Radial/circular compositions
- (D) Vertical scrolling mobile layouts

Q40. **Visual hierarchy** in graphic design is **primarily** established through:

- (A) Using a single typeface in one size throughout
- (B) **Contrast** in size, weight, colour, and spacing between elements to guide the viewer’s eye in order of importance
- (C) Placing all elements at equal distances from each other
- (D) Using only black and white (no colour)

Q41. Which design principle states that **elements that are physically close** to each other are **perceived as belonging together** (as a group), even without any connecting line or boundary?

- (A) Similarity
- (B) Continuity
- (C) Closure
- (D) Proximity



- Q42.** The “**F-pattern**” of eye movement — where readers scan horizontally across the top, then down the left side making shorter horizontal movements — is most commonly observed when reading:
- (A) Full-page print advertisements with large images
 - (B) Radial or circular compositions
 - (C) **Text-heavy web pages and long digital articles** where readers skim rather than read every word
 - (D) Symmetrically laid out posters
- Q43.** **Dieter Rams’** famous “Ten Principles of Good Design” (his “ten commandments”) were developed during his long career as Chief Design Officer at which **company**?
- (A) Apple Inc.
 - (B) Braun (the German consumer electronics company)
 - (C) Olivetti
 - (D) Philips
- Q44.** The iconic **Alessi “9093 Kettle”** (1985) — famous for the small **bird-shaped whistle** on its spout that sings when the water boils — was designed by:
- (A) Michael Graves
 - (B) Philippe Starck
 - (C) Ettore Sottsass
 - (D) Karim Rashid
- Q45.** **Naoto Fukasawa** is closely associated with the design philosophy of:
- (A) Memphis-style maximalism and bright colours
 - (B) Radical deconstruction of functional objects
 - (C) Biomimicry — designing by directly copying natural organisms



- (D) **“Without thought”** (*Without Thought / Muishiki*): designing objects that fit so naturally into human behaviour that they require no conscious thought to use

Q46. Jonathan Ive (Jony Ive), as Chief Design Officer at Apple, is most recognisably associated with designing:

- (A) The Braun ET66 calculator and audio equipment
- (B) The Herman Miller Aeron ergonomic chair
- (C) The iMac G3, iPod, iPhone, and the unibody MacBook Pro
- (D) The Olivetti Valentine typewriter

Q47. Philippe Starck designed the famous spider-legged **“Juicy Salif”** citrus squeezer for which brand?

- (A) Braun
- (B) Alessi
- (C) Vitra
- (D) Kartell

Q48. The Olivetti “Valentine” portable typewriter (1969) — with its bright red plastic casing and playful form — was designed by which design duo?

- (A) Ettore Sottsass and Perry King
- (B) Charles and Ray Eames
- (C) Arne Jacobsen and Verner Panton
- (D) Dieter Rams and Richard Fischer

Q49. Jasper Morrison is associated with which design approach?

- (A) High-tech biomorphic design using advanced composites
- (B) Postmodern irony and pop-cultural references



- (C) “**Super normal**” design — creating objects that are so quietly right, so unobtrusive in their ordinariness, that they blend seamlessly into everyday life
- (D) Radical sustainable design using only reclaimed materials

Q50. Stefan Sagmeister is known primarily for his work in which design discipline?

- (A) Industrial and furniture design
- (B) Architectural and interior design
- (C) Fashion and textile design
- (D) **Graphic design and typographic art** — especially for music-industry album covers, posters, and experimental self-promotional works

Part B: Drawing Tasks — 50 Marks

Q51. Foldable Bicycle Helmet

Sketch a **foldable bicycle helmet** for urban cyclists in **two states**: (a) **folded/stored** (flat, compact), (b) **expanded/worn** (full helmet shape on head). Show both states clearly **labelled**. Indicate **at least 2 safety features** (e.g. impact-absorbing liner, retention strap, ventilation channels) and **1 folding mechanism** (e.g. hinge system, collapsing panel, accordion fold).

Marks are awarded for: innovation of folding concept (3) + wearability and safety features (3) + labelling (2) + sketch quality (2). Total: 10 marks.



Q52. 5-Frame Storyboard for Water Conservation Animation

Draw a **5-frame storyboard** for a 30-second public awareness animation about **saving water**. Each frame must contain: a rough **thumbnail sketch** of the scene and a **1-line action description** below it. Use consistent characters and visual style across all 5 frames.

Marks are awarded for: narrative clarity (3) + visual consistency (2) + storyboard completeness (3) + drawing quality (2). Total: 10 marks.

Q53. Rural Artisan Cooperative Brand Identity

Design a **logo/brand mark** for a fictional rural artisan cooperative. The mark must work in **black-and-white only** and



use only **symbolic/iconic elements** (no typography or lettering inside the mark itself). Then show the mark applied to: **(a) a cotton bag silhouette** (show the bag outline with the mark placed on it).

Marks are awarded for: originality and concept (3) + visual strength in B&W (3) + application coherence (2) + craft (2). Total: 10 marks.

Q54. Contemporary Art Gallery Facade

Sketch the **exterior facade** of a contemporary art gallery building, shown in **perspective (eye-level view, daylight)**. The design must clearly show: **entrance zone, display windows or gallery openings, signage placement**, and **at least one distinctive architectural feature** (e.g. cantilevered canopy, skylights, textured wall panel, water feature at entry).

Marks are awarded for: architectural expression (3) + perspective accuracy (3) + atmosphere and detail (2) + line quality (2). Total: 10 marks.



Q55. City Rooftop Garden Scene

Illustrate a **rooftop garden in a dense city**, seen from **eye level**. Include: **planted beds**, a **water feature** (small fountain or water trough), **seating**, and an **urban backdrop** (buildings, skyline). Show **at least 3 people** using the space. Suggest the **contrast** between organic green elements and the hard built environment below.

Marks are awarded for: spatial composition (3) + inclusion of required elements (2) + atmosphere and people (3) + rendering (2). Total: 10 marks.



Detailed Solutions**Part A — Visual MCQ Solutions****Q1.****Solution**

Concept: When a light source is positioned at the **top-left**, it illuminates the top and left faces of the object most directly. The shadow is cast in the **opposite direction** from the light — towards the **bottom-right**.

Step 1 — Light direction: Light from top-left means rays travel toward bottom-right.

Step 2 — Shadow direction: The shadow falls on the ground plane to the lower-right of the object base, as illustrated in the TikZ figure where the dashed shadow polygon extends to the bottom-right of the cube.

Step 3 — Shadow shape: The cube's silhouette as seen from the top-left projects a roughly quadrilateral shadow (not a perfect square because of the angled light direction).

Why other options are wrong:

- (A) Directly below — that would require light from directly above (zenith), not from top-left.
- (B) Shadow to the top-right — shadow is always opposite the light, not on the same side.
- (D) No shadow — opaque objects always cast shadows with a point or directional light source.

Answer: (C) **Go Back to Q1**

Q2.**Solution**

Concept: When a **point light source is directly above** the cylinder's central axis, rays travel straight down, symmetrically around the cylinder. The shadow on the ground plane is the cylinder's footprint — a **circle** (or ellipse if the ground is viewed at an angle).

Step 1 — Geometry: Light directly above means the shadow is the projection of the cylinder's base circle straight downward — a circle of the same radius.

Step 2 — Option matching: Option (D) correctly states “a circle (or circular



ellipse) directly beneath the cylinder.”

Why other options are wrong:

- (A) Elongated ellipse to one side — requires light from an oblique angle, not directly above.
- (B) Rectangle — the cylinder’s shadow from above is its circular base, not a rectangle.
- (C) Triangle — triangles are cast by cone-shaped objects, not cylinders.

Answer: (D) **Go Back to Q2**

Q3.

Solution

Concept: A cone with its apex at the top and base on the ground, lit by **light from the side** (parallel to the ground), casts a shadow that is the projection of the cone’s silhouette. The silhouette of a cone from the side is a **triangle**, so the shadow on the ground is an **elongated triangle**.

Step 1 — Silhouette: From the left, the cone appears as a triangle (two slanted edges meeting at the apex).

Step 2 — Shadow projection: Horizontal light rays from the left carry the triangular silhouette to the right, casting an elongated triangular shadow extending to the right on the ground.

Why other options are wrong:

- (B) Perfect circle — a circular shadow would require light from directly above.
- (C) Rectangle matching the cone’s height — rectangles are cast by box-shaped objects.
- (D) Crescent shape — crescents are not shadows of simple geometric solids under parallel light.

Answer: (A) **Go Back to Q3**



Q4.

Solution

Concept: When light comes from **directly above** (vertical light rays), the shadow on the ground is the **plan view** (top-down footprint) of the object. The L-shaped flat object, viewed from above, has an L-shaped footprint — so the shadow is **L-shaped**.

Step 1 — Top-down projection: Vertical light travels straight down. The shadow is the orthographic top-down projection of the object onto the ground.

Step 2 — L-shape footprint: The L-shape's plan view is the same L-shape. Therefore the shadow on the ground directly beneath the object is L-shaped.

Why other options are wrong:

- (A) A single tall rectangle — that would be the shadow of a simple upright slab, not an L.
- (C) T-shaped shadow — a T requires a T-shaped object.
- (D) Circular shadow — circles are cast by cylinders or spheres, not L-shapes.

Answer: (B) **Go Back to Q4**

Q5.

Solution

Concept: A sphere lit from **45° upper-right** casts a shadow that is an **ellipse** on the ground, offset in the direction **opposite** to the light — i.e. toward the **lower-left**. The ellipse is elongated because the light hits at an oblique angle.

Step 1 — Shadow direction: Light from upper-right $\Rightarrow$ shadow toward lower-left.

Step 2 — Shadow shape: The circular cross-section of the sphere projected at 45° gives an ellipse. At exactly 45° the ellipse has a specific aspect ratio; the major axis is longer than the minor axis.

Step 3 — Match option: Option (C) states “an ellipse offset toward the lower-left” — this is correct.

Why other options are wrong:

- (A) Perfect circle directly beneath — requires light from directly above (90°).
- (B) A very long thin line — would require near-horizontal light (grazing angle).
- (D) Square shadow — spheres never cast square shadows.



Answer: (C) Go Back to Q5

Q6.

Solution

Concept: When light comes from **directly in front** (perpendicular to the triangular face of the prism), the light rays are parallel and travel horizontally toward the wall behind. The shadow on the wall behind is the **orthographic projection** of the prism's silhouette — which, viewed from the front, is the prism's **bounding rectangle** (width = base of triangle, height = triangle's height).

Step 1 — Front silhouette: The triangular face fits within a bounding rectangle. Parallel light from the front projects this bounding rectangle onto the wall.

Step 2 — Why rectangle, not triangle: The rectangular body of the prism (the lateral faces) also intercepts the light, and the overall silhouette is bounded by the widest point (the base) and the tallest point (the apex) — forming a rectangle.

Step 3: Option (D) is correct.

Why other options are wrong:

- (A) Triangle (front face) — the shadow is the bounding silhouette, not just the front triangular face, because the rectangular lateral faces contribute to the shadow boundary.
- (B) Circle — impossible for a prism.
- (C) Hexagon — not a possible shadow of this prism from this angle.

Answer: (D) Go Back to Q6

Q7.

Solution

Concept: In a **brick-wall (running bond)** tiling, each row is offset horizontally by half a brick width from the rows above and below it. This means the top-right corner cell of an offset row must be a **full brick** aligned with the offset of that row — not a partial brick or vertical brick.

Step 1 — Identify the offset: Looking at the grid, rows alternate between starting at 0 and starting at half-a-brick width. The top row (row 4) starts at -0.9 (offset), so the third brick in that row begins at 0.9 and the **fourth** begins at 2.7 , meaning the gap marked ? should be filled by a full brick from $x = 2.7$ to $x = 4.5$.



Step 2 — Option match: Option (A) correctly says “A full-width brick in the same grey fill, aligned with the offset row.”

Why other options are wrong:

- (B) Half-brick shifted right — would break the running-bond module.
- (C) Empty cell — the pattern has no empty cells; all positions are filled.
- (D) Vertical brick — brick-wall tiling uses horizontally oriented bricks.

Answer: (A) **Go Back to Q7**

Q8.

Solution

Concept: The pattern uses a **checkerboard-style diagonal stripe** system: cells on even diagonals (where $\text{row} + \text{column}$ is even) are dark, and cells on odd diagonals are light. The missing cell is at row 3, column 3 (0-indexed: row 3, col 3 $\Rightarrow 3 + 3 = 6$, which is even), so it should be **dark**.

Step 1 — Diagonal rule: Each diagonal stripe alternates dark/light. Diagonals where the sum of the (0-indexed) row and column is **even** are **dark**.

Step 2 — Missing cell position: The top-right cell (row index 3, column index 3) gives $\text{sum} = 6$ (even), so it is **dark (grey)**.

Step 3: Option (B) — “A dark (grey) cell” — is correct.

Why other options are wrong:

- (A) Light cell — would be correct only if the sum were odd.
- (C) Half-dark, half-light — not a feature of this simple diagonal stripe pattern.
- (D) Diagonal line through it — the pattern fills entire cells, not half-cells.

Answer: (B) **Go Back to Q8**



Q9.

Solution

Concept: In the pinwheel pattern, each row has pinwheels rotated at $0, 90, 180, \dots$ and each successive row shifts by 90 . The pattern in row 3 (top) so far is: column 1 at 180 , column 2 at 270 . Following the $+90$ progression, column 3 should be at $270 + 90 = 360 = 0$.

Step 1 — Row 3 progression: $180 \rightarrow 270 \rightarrow 360 (= 0)$.

Step 2 — Identify 0 pinwheel: A 0 pinwheel is the same orientation as a 360 one — it is the “original” orientation, same as the starting position of row 1, column 1. Option (C) states “Pinwheel rotated $360^\circ/0^\circ$ ” — this matches.

Why other options are wrong:

- (A) 90° — that would follow 270 only in a $+90$ step from 270 , giving $360 = 0$, not 90 .
- (B) 180° — already appeared in column 1 of this row.
- (D) Plain grey square — the pattern always has pinwheels; no blank cells.

Answer: (C) **Go Back to Q9**

Q10.

Solution

Concept: The **Greek key (meander)** is a symmetrical border pattern. Each corner of the border has a mirror-image counterpart: the top-left and top-right corners are mirror images of each other, as are the bottom-left and bottom-right corners.

Step 1 — Identify symmetry: The pattern shown has a meander segment at the top-left and the bottom-right. The **top-right corner** must mirror the **top-left corner** horizontally to maintain the bilateral symmetry of the border.

Step 2 — Option match: Option (D) — “A meander segment that mirrors the top-left corner” — is the correct answer.

Why other options are wrong:

- (A) Plain straight line — would break the Greek-key pattern entirely.
- (B) Circular spiral — Greek key uses right-angle turns, not circular curves.
- (C) Diagonal zigzag — meanders use only horizontal and vertical lines.

Answer: (D) **Go Back to Q10**



Q11.

Solution

Concept: In a **diamond lattice with alternating fill**, the pattern follows a simple rule: diamonds at even-parity positions (where row + column index is even) are filled dark, and those at odd-parity positions are white. The missing diamond's position must be determined from the surrounding context.

Step 1 — Identify parity: Based on the described alternating pattern, the missing diamond is at an even-parity position, requiring a **dark fill**.

Step 2 — Option match: Option (A) correctly states the missing diamond should be dark because it alternates with the surrounding white diamonds.

Why other options are wrong:

- (B) White — would place two white diamonds adjacent, breaking the alternation.
- (C) Grey 50% — gradients are not part of this binary alternating pattern.
- (D) Striped diagonally — not a feature of the described lattice pattern.

Answer: (A) [Go Back to Q11](#)

Q12.

Solution

Concept: In a **herringbone parquet** pattern, planks alternate between two directions — typically 45 and 135 — to create the characteristic V-shaped or zigzag arrangement. If the adjacent plank is at 45, the missing plank must be at 135 to continue the herringbone zigzag.

Step 1 — Herringbone rule: Adjacent planks in a herringbone always differ by 90 in orientation. If one plank is at 45, the next in the zigzag is at 135.

Step 2 — Option match: Option (B) states 135 — this is correct.

Why other options are wrong:

- (A) 0 (horizontal) — would create a basket-weave, not a herringbone.
- (C) 90 (vertical) — would also create a different pattern; herringbone uses diagonal planks.
- (D) Same 45 as adjacent — creates a parallel band instead of the V-shaped zigzag.



Answer: (B) Go Back to Q12

Q13.

Solution

Concept: When **red and blue transparent materials** (like coloured cellophane or glazes) overlap, the result in **subtractive mixing** is **purple/violet**. Red reflects red light (absorbs green and blue to some degree); blue reflects blue light (absorbs red and green to some degree). In the overlap, mostly red and blue wavelengths pass through, giving a purple/violet appearance.

Step 1 — Subtractive mixing (pigment/transparent film): Red + Blue → **Purple/Violet**.

Step 2: This matches option (C).

Why other options are wrong:

- (A) Green — Green + Red = Yellow (additive); Red + Blue does not give green.
- (B) Yellow — Yellow = Red + Green (additive); not a product of red + blue.
- (D) Orange — Orange = Red + Yellow; no yellow is present here.

Answer: (C) Go Back to Q13

Q14.

Solution

Concept: In **subtractive colour mixing** (as with transparent coloured films, dyes, or glazes): **Yellow + Cyan = Green**. Yellow transmits red and green light (absorbs blue); Cyan transmits green and blue light (absorbs red). The overlap transmits only **green** light, because green is the wavelength allowed by both filters.

Step 1 — Analysis: Yellow film: allows R + G, blocks B. Cyan film: allows G + B, blocks R. Overlap: only G (green) is allowed by both.

Step 2: Option (D) — Green — is correct.

Why other options are wrong:

- (A) Red — Red is blocked by the cyan filter.
- (B) Blue — Blue is blocked by the yellow filter.
- (C) Orange — Orange is in the red-yellow range; blocked by cyan.



Answer: (D) Go Back to Q14

Q15.

Solution

Concept: In the **CMY subtractive model** used in printing: **Cyan + Magenta = Blue** (or violet-blue). Cyan absorbs red; Magenta absorbs green. Together they absorb both red and green, reflecting only blue/violet wavelengths.

Step 1 — CMY logic: Cyan absorbs R; Magenta absorbs G; overlap absorbs R+G, leaving B.

Step 2: Option (A) — Blue (or violet-blue) — is correct.

Why other options are wrong:

- (B) Green — Green = Cyan + Yellow in CMY.
- (C) Yellow — Yellow is a primary in CMY, not a product of C + M.
- (D) Red — Red = Magenta + Yellow in CMY.

Answer: (A) Go Back to Q15

Q16.

Solution

Concept: In **additive colour mixing** (light), the primaries are Red, Green, Blue (RGB). Combining Red light and Green light produces **Yellow** light. This is a fundamental result of additive mixing and is why a TV screen produces yellow by mixing red and green pixels.

Step 1 — RGB additive rule: Red + Green = **Yellow**.

Step 2: Option (B) — Yellow — is correct.

Why other options are wrong:

- (A) Blue — Blue is one of the primaries; R + G does not produce blue.
- (C) Cyan — Cyan = Green + Blue (additive).
- (D) Magenta — Magenta = Red + Blue (additive).

Answer: (B) Go Back to Q16



Q17.

Solution

Concept: In **additive mixing** (light), combining **all three primary colours** — Red, Green, and Blue — at full intensity produces **White** light. This is because the three primaries together cover the entire visible spectrum, and the eye perceives the combination as white.

Step 1 — RGB + G + B: $R + G = \text{Yellow}$; $\text{Yellow} + B = \text{White}$. Or equivalently: $R + G + B = \text{White}$.

Step 2: Option (C) — White — is correct.

Why other options are wrong:

- (A) Black — Black is the absence of light (additive) or the result of mixing all pigments (subtractive).
- (B) Grey — Grey is a desaturated colour; mixing RGB at full intensity gives white, not grey.
- (D) Brown — Brown is not a result of additive primary mixing.

Answer: (C) **Go Back to Q17**

Q18.

Solution

Concept: In **CMYK offset printing**, using **only K (100% black)** produces a flat, slightly brownish-black because the paper's tone shows through. "**Rich black**" is achieved by combining all four channels — typically $C60 + M40 + Y40 + K100$ — to create a denser, richer, more neutral-looking black with greater ink coverage.

Step 1 — Why rich black works: The cyan, magenta, and yellow layers fill the paper's texture and absorb a wider range of light wavelengths, making the black appear deeper and more saturated.

Step 2: Option (D) — $C60 + M40 + Y40 + K100$ — is the standard rich-black formula used in professional print design.

Why other options are wrong:

- (A) K100 only — produces standard (flat) black, not the richest possible black.
- (B) C100 only — produces cyan (not black).
- (C) M100 + Y100 — produces red/orange (not black).



Answer: (D) Go Back to Q18

Q19.

Solution

Concept: In **Hinduism**, the colour **Saffron/Ochre** (Bhagwa or Kesari) holds the highest spiritual significance. It symbolises fire, the burning away of impurities, knowledge, and renunciation of the material world. Hindu saints, sanyasis (renunciants), and monks traditionally wear saffron-coloured robes to signify their spiritual path.

Step 1: Saffron = knowledge, purity, spiritual fire, renunciation in Hindu tradition.

Step 2: Option (A) — Saffron/Ochre (Bhagwa) — is correct.

Why other options are wrong:

- (B) Green — associated with nature and fertility; not specifically worn by Hindu ascetics.
- (C) White — worn for mourning in many Hindu traditions, and also by widows; not specifically the “knowledge” colour.
- (D) Red — associated with auspiciousness, marriage, and the goddess Lakshmi; not with renunciation.

Answer: (A) Go Back to Q19

Q20.

Solution

Concept: **Sambalpuri ikat** (Bandha) from Odisha is one of India’s most revered handwoven textile traditions. It is characterised by intricate ikat (resist-dyeing of yarns before weaving) patterns in a rich **red/maroon and black** palette on a natural white or off-white cotton or silk ground. Traditional motifs include shankha (conch), chakra (wheel), phula (flower), and deer.

Step 1: Sambalpuri = rich red/maroon + black on white/off-white base.

Step 2: Option (B) correctly describes this combination.

Why other options are wrong:

- (A) Black and gold on white — closer to Banarasi or Kanjeevaram silks.



- (C) Pastel blue and pink — not characteristic of Sambalpuri weaving.
- (D) Indigo and saffron stripes — closer to certain Rajasthani or Gujarati weaves.

Answer: (B) **Go Back to Q20**

Q21.

Solution

Concept: In **Chinese culture**, **red** is the most auspicious colour — it symbolises **good luck, happiness, joy, and prosperity**. Red is used in Chinese New Year celebrations, weddings, lucky envelopes (hongbao), lanterns, and traditional costumes. It is associated with positive energy and warding off evil spirits.

Step 1: Red in China = good luck, happiness, prosperity.

Step 2: Option (C) is correct.

Why other options are wrong:

- (A) Mourning and death — white is the colour of mourning in Chinese culture.
- (B) Royalty and power — yellow/gold is the imperial colour in Chinese tradition.
- (D) Wisdom and age — not a primary association of red in Chinese culture.

Answer: (C) **Go Back to Q21**

Q22.

Solution

Concept: **Pantone 18-1750 “Viva Magenta”** (Colour of the Year 2023) is a bold, warm, **crimson-red** hue — described by Pantone as “a shade rooted in nature, evoking the red of cochineal dye.” It belongs to the **crimson/warm red family**, sitting between red and pink/magenta on the spectrum.

Step 1: Viva Magenta = warm, slightly bluish-red; belongs to the crimson-red family.

Step 2: Option (D) — “Crimson-red / warm red family” — is correct.

Why other options are wrong:



- (A) Orange-yellow — warm but on the yellow side; Viva Magenta is red-pink.
- (B) Teal-green — completely different; teal is a blue-green cool colour.
- (C) Violet-purple — while Viva Magenta has a slight reddish-pink tone, it is classified as a red, not a violet.

Answer: (D) **Go Back to Q22**

Q23.

Solution

Concept: In **Islamic art and architecture**, **blue** (especially the deep lapis lazuli blue and turquoise derived from glazed tilework) symbolises **Heaven, the divine, and eternal life**. The colour of the sky and water, blue is associated with the infinite, the divine presence, and protection. Iconic examples include the tilework of the Shah Mosque in Isfahan, Iran, and the Blue Mosque in Istanbul.

Step 1: Blue in Islamic architecture = heaven, divinity, eternity.

Step 2: Option (A) is correct.

Why other options are wrong:

- (B) Earth and fertility — green is more commonly associated with paradise/fertility in Islamic symbolism.
- (C) Mourning and grief — not a primary association of blue in Islamic contexts.
- (D) Royalty restricted to rulers — blue was widely used in sacred architecture, not restricted to royalty.

Answer: (A) **Go Back to Q23**



Q24.

Solution

Concept: **Bandhani** (bandhej, tie-and-dye) from Rajasthan is famous for its **vibrant colours** — particularly **reds, pinks, magentas, and sometimes yellows and greens** on a rich background. The technique involves tying tiny knots in the fabric before dyeing, creating dot patterns. The dominant palette is characterised by **brilliant reds, pinks, and magentas** — the characteristic “Rajasthani” colours associated with festivity and celebration.

Step 1: Bandhani = vibrant red, pink, magenta palette on vivid backgrounds.

Step 2: Option (B) is correct.

Why other options are wrong:

- (A) Indigo blue — Indigo is more associated with Madhubani prints and some block-print fabrics from Rajasthan; not the dominant bandhani colour.
- (C) Earthy brown and beige — these are neutral tones not typical of celebratory bandhani.
- (D) Emerald green — while green appears in bandhani, it is not the dominant or most characteristic colour.

Answer: (B) **Go Back to Q24**

Q25.

Solution

Concept: A **modular grid** in layout design is a grid system divided into **both rows and columns**, creating a matrix of equally sized **modules** (rectangular cells). These modules provide a flexible but orderly framework for placing text, images, and other elements in complex multi-page publications (books, magazines, annual reports). It differs from a simple column grid (which has only vertical divisions).

Step 1: Modular grid = rows + columns = matrix of rectangular modules.

Step 2: Option (C) is correct.

Why other options are wrong:

- (A) Single-column layout with wide margins — that is a manuscript grid, the simplest grid type.
- (B) Diagonal guide lines — diagonal grids are specialised; a modular grid uses horizontal and vertical lines.



- (D) Based solely on the golden ratio — while proportions can inform a modular grid, the definition is not about the golden ratio specifically.

Answer: (C) **Go Back to Q25**

Q26.

Solution

Concept: Leading (from the lead strips placed between lines of movable type in letterpress printing) refers to the **vertical distance from one text baseline to the next**. It is one of the three key spacing controls in typography, alongside tracking (letter-spacing) and kerning (pair-specific spacing).

Step 1: Leading = baseline-to-baseline vertical spacing between lines.

Step 2: Option (D) is correct.

Why other options are wrong:

- (A) Horizontal space between individual letters — that is *tracking* (global) or *kerning* (pair-specific).
- (B) Stroke thickness (weight) — a font weight attribute, not spacing.
- (C) Width of text column — a layout/page-design measure, not a typographic spacing term.

Answer: (D) **Go Back to Q26**

Q27.

Solution

Concept: Garamond is a classic typeface designed in the 16th century by Claude Garamond. It belongs to the **Old Style** (Humanist Serif) classification, characterised by: *low stroke contrast*, *angled (diagonal) stress* following the pen angle of Renaissance scribes, *bracketed serifs* (serifs that curve smoothly into the stroke), and an overall warm, humanistic feel. Key examples in the Old Style group: Garamond, Caslon, Palatino.

Step 1: Low contrast + angled stress + bracketed serifs = Old Style (Humanist Serif).

Step 2: Option (A) is correct.

Why other options are wrong:



- (B) Transitional Serif (e.g. Baskerville, Times New Roman) — higher contrast, more upright stress than Old Style.
- (C) Modern (Didone) Serif (e.g. Bodoni, Didot) — very high contrast, completely vertical stress, hairline serifs (not bracketed).
- (D) Slab Serif (e.g. Clarendon, Rockwell) — thick, block-like serifs with little contrast.

Answer: (A) [Go Back to Q27](#)

Q28.

Solution

Concept: Hinting (or grid-fitting) is a process in digital type rendering where the mathematical outlines of letterform curves are adjusted to align with the raster pixel grid of a screen. This improves **legibility and sharpness at small point sizes** on low-resolution screens, preventing blurry or misshapen letterforms caused by anti-aliasing artifacts.

Step 1: Hinting = adjusting outlines to pixel grid for crisp rendering at small sizes on screen.

Step 2: Option (B) is correct.

Why other options are wrong:

- (A) Automatically selects the best typeface — that is a font recommendation feature, unrelated to hinting.
- (C) Increases file size to add more glyphs — hinting may slightly increase font file size but its purpose is rendering quality, not glyph count.
- (D) Converts serif to sans-serif — hinting does not alter typeface classification.

Answer: (B) [Go Back to Q28](#)



Q29.

Solution

Concept: The **inverted pyramid** is a journalistic writing and editorial layout structure where the **most important information** (the lead: who, what, when, where, why) is presented **first (at the top)**, followed by supporting details in decreasing order of importance, with background/context at the bottom. This allows readers who stop reading early to still get the essential message.

Step 1: Inverted pyramid = most important first, decreasing importance downward.

Step 2: Option (D) is correct.

Why other options are wrong:

- (A) Least important at top — that describes the opposite (a regular pyramid structure).
- (B) Equal-sized blocks — that describes a grid or modular structure.
- (C) Images always at the bottom — image placement is a layout decision independent of the inverted pyramid concept.

Answer: (D) [Go Back to Q29](#)

Q30.

Solution

Concept: A **typographic scale** system defines a set of harmonious, proportionally related **type sizes**. It may be based on a mathematical ratio (golden ratio, major third, perfect fourth, etc.) or on historical practice. It establishes which font sizes to use and creates visual rhythm and hierarchy through size relationships. However, a typographic scale **does not specify colour values** — colour is a separate design decision entirely outside the scope of a size scale.

Step 1: Typographic scale = set of harmonious sizes. Not about colour.

Step 2: Option (C) — “It specifies the exact colour values to use for each size of type” — is **NOT** a property of a typographic scale. This is the correct answer to “which is NOT a property.”

Why other options are wrong (i.e. these ARE true properties):

- (A) Creates visual hierarchy through size relationships — TRUE; size contrast is central to typographic hierarchy.



- (B) Provides pre-determined harmonious sizes — TRUE; that is the definition.
- (D) Can be ratio-based — TRUE; scales based on the golden ratio or musical intervals (major third = 1.25, perfect fourth = 1.333) are common.

Answer: (C) **Go Back to Q30**

Q31.

Solution

Concept: Charles and Ray Eames are celebrated for revolutionising furniture design through their mastery of **moulded plywood** (developed with the US Navy during WWII for leg splints) and later **fibreglass-reinforced plastic shells** (used in the iconic Eames Shell Chair, 1948–50). Their work at Herman Miller defined mid-century modern furniture and demonstrated that industrial materials could be used beautifully.

Step 1: Eames = moulded plywood + fibreglass shell innovation.

Step 2: Option (A) is correct.

Why other options are wrong:

- (B) Hand-carved solid teak — associated with Scandinavian craftsman tradition (e.g. Hans Wegner), not Eames.
- (C) Cast iron with leather — industrial Victorian furniture; not Eames.
- (D) Woven rattan and bamboo — associated with Asian and tropical design traditions.

Answer: (A) **Go Back to Q31**

Q32.

Solution

Concept: The **Ant Chair** (Model 3100, 1952) was designed by **Arne Jacobsen** for Fritz Hansen. Named for its waist-like silhouette resembling an ant's body, it was the first chair to use a single continuous piece of moulded plywood for the seat and back. It originally had three legs, later expanded to four.

Step 1: Ant Chair (1952) = Arne Jacobsen for Fritz Hansen.

Step 2: Option (B) is correct.



Why other options are wrong:

- (A) Alvar Aalto — designed the Paimio Chair and Stool 60, both in bent plywood, but not the Ant Chair.
- (C) Verner Panton — designed the all-plastic Panton Chair (1967), not the Ant Chair.
- (D) Hans Wegner — designed The Chair (1949) and Y-Chair; known for craftsmanship in wood, not the Ant Chair.

Answer: (B) **Go Back to Q32****Q33.****Solution**

Concept: Marcel Breuer's "Wassily Chair" (B3, 1925–26) was named after Wassily Kandinsky and was the first furniture design to use **tubular steel** as its primary structural material. Breuer was inspired by the handlebars of his Adler bicycle and worked with the steel-bending manufacturer Mannesmann. The frame is bent from a single continuous tube, with fabric slings for seat, back, and armrests.

Step 1: Wassily Chair = tubular chrome-plated steel frame (groundbreaking).

Step 2: Option (D) is correct.

Why other options are wrong:

- (A) Bent laminated plywood — Alvar Aalto and Charles Eames used this; Breuer used steel tubes.
- (B) Cast aluminium — used later by designers like Hans Coray (Landi Chair, 1938); not Breuer's 1925 design.
- (C) Fibreglass-reinforced polymer — Eames introduced this in the late 1940s; not Breuer's innovation.

Answer: (D) **Go Back to Q33**

Q34.

Solution

Concept: **Alvar Aalto** (1898–1976) was a Finnish architect and designer whose furniture — chairs, stools (Stool 60), shelving, and vases — exemplify **Finnish design**: warmth of natural materials (bent birch plywood), organic human-centred forms, and the Nordic Modernist philosophy of integrating nature and industry. His work is produced by Artek (founded 1935).

Step 1: Alvar Aalto = Finnish design + bent birch plywood + Nordic Modernism.

Step 2: Option (C) is correct.

Why other options are wrong:

- (A) Danish Modernism — represented by Arne Jacobsen, Hans Wegner, Finn Juhl; Aalto is Finnish.
- (B) Swedish Functionalism — represented by designers such as Bruno Mathsson; Aalto is Finnish, not Swedish.
- (D) Dutch De Stijl design — De Stijl is associated with Gerrit Rietveld (Red Blue Chair, 1917); not Aalto's tradition.

Answer: (C) **Go Back to Q34**

Q35.

Solution

Concept: **Dieter Rams** (b. 1932), Chief Design Officer at Braun for decades, is famous for his principle of “**Less, but better**” (*Weniger, aber besser*) — a rigorous philosophy of functional simplicity, restraint, and honesty. His ten principles of good design include “Good design is as little design as possible” and “Good design is honest.” His aesthetic is characterised by clean geometric forms, neutral palettes, and the elimination of anything non-functional.

Step 1: Dieter Rams = radical simplicity, “less but better,” functional honesty.

Step 2: Option (A) is correct.

Why other options are wrong:

- (B) Maximalist ornamentation — the opposite of Rams' philosophy.
- (C) Recycled and found materials — associated with contemporary sustainable design movements; not Rams' focus.
- (D) High-gloss surfaces and bold primaries — associated with Memphis



Group (Sottsass); opposite of Rams.

Answer: (A) Go Back to Q35

Q36.

Solution

Concept: Knock-down (KD) or flat-pack furniture was pioneered at scale by IKEA and others. The primary design concern it addresses is **efficient logistics and cost reduction**: flat-packed items occupy far less volume during transport (more units per truck/container), reducing shipping costs. Customers assemble the furniture themselves, eliminating assembly labour costs and allowing compact retail storage.

Step 1: Flat-pack = smaller volume → more per shipment → lower transport cost.

Step 2: Option (B) — efficient logistics, reduced shipping volume, lower cost — is correct.

Why other options are wrong:

- (A) Aesthetic appeal — flat-pack is driven by logistics/economy, not visual richness.
- (C) Maximum structural strength — KD joints (cam locks, dowels) are generally weaker than traditional joinery; strength is not the primary concern.
- (D) Exclusive sustainable timber — sustainability may be a secondary concern for some brands, but KD's defining concern is logistics efficiency.

Answer: (B) Go Back to Q36

Q37.

Solution

Concept: The **rule of thirds** divides the frame into a 3×3 grid using two horizontal lines and two vertical lines. The four **intersection points** (also called “power points” or “crash points”) are where the horizontal and vertical lines cross. Placing the main subject or focal point at one (or more) of these four intersections creates a more dynamic, visually interesting composition than centring.

Step 1: 3×3 grid → 2 horizontal + 2 vertical lines → 4 intersection points.

Step 2: Option (D) is correct.



Why other options are wrong:

- (A) Exact centre — placing subjects at the centre creates a static, symmetrical composition; the rule of thirds recommends off-centre placement.
- (B) Four corners — corners are outside the central visual field and are rarely primary focal zones.
- (C) Top and bottom edges — edge placement is a different compositional technique (e.g. horizon placement).

Answer: (D) **Go Back to Q37****Q38.****Solution**

Concept: The **golden ratio** ($\phi \approx 1.618$) is applied in design to establish **proportional relationships** between elements that feel inherently balanced and harmonious. In typography, this could mean choosing a headline size that is ϕ times the body text size. In layout, a sidebar might be $\frac{1}{\phi}$ of the page width. In product design, dimensions of height to width might follow ϕ .

Step 1: Golden ratio → proportional relationships between design elements.

Step 2: Option (C) is correct.

Why other options are wrong:

- (A) Number of colours in a palette — colour count is a separate decision; the golden ratio does not prescribe palette size.
- (B) Paper stock weight — paper weight is a material/printing specification, unrelated to the golden ratio.
- (D) Exact pixel dimensions — the golden ratio gives proportional ratios, not absolute pixel values.

Answer: (C) **Go Back to Q38**

Q39.

Solution

Concept: The **Z-pattern** (or Z-shaped reading path) describes how viewers scan layouts with sparse text and dominant visual elements (posters, advertisements, landing pages, magazine spreads). The eye moves: **top-left** (entry) → **top-right** (across the top) → **diagonal down-left** (descending through the middle) → **bottom-right** (final call to action). This reflects how readers scan, not read, when content density is low.

Step 1: Z-pattern = sparse visual layouts; eye traces a Z across the page.

Step 2: Option (A) is correct.

Why other options are wrong:

- (B) Dense multi-column text — that elicits the *F-pattern* (horizontal sweeps that grow shorter as the reader moves down).
- (C) Radial/circular compositions — these create centripetal or centrifugal eye movement, not a Z.
- (D) Vertical scrolling mobile layouts — mobile layouts typically generate a vertical scan, not a Z.

Answer: (A) **Go Back to Q39**

Q40.

Solution

Concept: **Visual hierarchy** is the arrangement and presentation of design elements so that the viewer's eye is guided in a deliberate order of importance. It is **primarily established through contrast**: contrasts in **size** (large elements attract the eye first), **weight** (bold elements stand out), **colour** (bright or contrasting colours draw attention), and **spacing** (isolated elements gain prominence through white space).

Step 1: Hierarchy = contrast (size, weight, colour, spacing) to create an order of visual importance.

Step 2: Option (B) is correct.

Why other options are wrong:

- (A) Single typeface in one size — uniformity destroys hierarchy.
- (C) Equal distances between elements — equal spacing creates a grid, not a



hierarchy.

- (D) Only black and white — limiting colour reduces one dimension of contrast but hierarchy can still exist; however, Option (B) is the primary answer.

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

Q41.

Solution

Concept: The **Gestalt principle of Proximity** states that elements that are **physically close** to one another are perceived as belonging together as a group, even without any visual boundary, line, or colour connecting them. This is one of the foundational principles of perceptual organisation identified by Gestalt psychologists.

Step 1: Physical closeness → perceived grouping = the Law of Proximity.

Step 2: Option (D) — Proximity — is correct.

Why other options are wrong:

- (A) Similarity — elements that look alike (same colour, shape, size) are grouped; not about spatial closeness.
- (B) Continuity — elements arranged along a line or curve are perceived as a continuous flow.
- (C) Closure — the mind fills in gaps to perceive a complete, closed shape.

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

Q42.

Solution

Concept: The **F-pattern** (documented extensively by Nielsen Norman Group) describes how readers scan **text-heavy digital content** (web pages, news articles, long-form digital text). The scan path resembles an “F”: two horizontal sweeps across the top of the content, followed by a vertical sweep down the left side. This occurs because readers skim rather than read every word in dense text environments.

Step 1: F-pattern = text-heavy web pages, digital articles; skim-reading behaviour.

Step 2: Option (C) is correct.



Why other options are wrong:

- (A) Full-page print ads with large images — image-dominant layouts trigger Z-pattern or focal-point scanning, not F-pattern.
- (B) Radial/circular compositions — these generate centripetal scanning patterns.
- (D) Symmetrically laid out posters — posters tend to generate Z or focal-point scanning, not F-pattern.

Answer: (C) **Go Back to Q42****Q43.****Solution**

Concept: Dieter Rams worked as Chief Design Officer (Chefdesigner) at **Braun GmbH** (the German consumer electronics and household products company) from 1961 to 1995. His Ten Principles of Good Design were developed in response to the question: “Is my design good design?” — and were applied to Braun products including radios, shavers, calculators (ET66), and kitchen appliances. His work at Braun deeply influenced Apple’s design language under Jony Ive.

Step 1: Dieter Rams + Ten Principles = Braun (German consumer electronics).

Step 2: Option (B) is correct.

Why other options are wrong:

- (A) Apple Inc. — Apple was influenced by Rams (Jony Ive cited him), but Rams worked at Braun, not Apple.
- (C) Olivetti — Olivetti is associated with Ettore Sottsass, Perry King, and Michele De Lucchi.
- (D) Philips — Philips employed designers like Louis Kalff; not Rams’ employer.

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

Q44.

Solution

Concept: The Alessi “9093 Kettle” (1985) was designed by **Michael Graves**, the American Postmodern architect. Its iconic feature is the red **bird-shaped whistle** on the spout that produces a bird-song sound when the water boils. The kettle became one of Alessi’s bestselling and most recognisable products, cementing Michael Graves’ reputation as a designer who brought architectural playfulness into domestic objects.

Step 1: Alessi 9093 Kettle (1985) + bird whistle = Michael Graves.

Step 2: Option (A) is correct.

Why other options are wrong:

- (B) Philippe Starck — designed the Juicy Salif citrus squeezer for Alessi, not the bird kettle.
- (C) Ettore Sottsass — associated with Memphis Group and Olivetti; not the Alessi bird kettle.
- (D) Karim Rashid — a contemporary industrial designer known for colourful biomorphic forms; not the 1985 kettle designer.

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

Q45.

Solution

Concept: Naoto Fukasawa is the Japanese industrial designer known for the “**Without Thought**” (*Muishiki*) design philosophy — the idea that the best design is so intuitive, so aligned with habitual human behaviour, that using the object requires **no conscious thought**. Products that achieve this state seem to vanish into the background of daily life. Fukasawa co-founded the “Super Normal” concept with Jasper Morrison and works with brands like Muji, B&B Italia, and Maruni.

Step 1: Fukasawa = “Without Thought” / Muishiki = intuitive, subconscious design.

Step 2: Option (D) is correct.

Why other options are wrong:

- (A) Memphis-style maximalism — Memphis = Ettore Sottsass; opposite of Fukasawa’s restraint.



- (B) Radical deconstruction — Deconstruction = Jacques Derrida and Deconstructivist architecture (Zaha Hadid, Peter Eisenman); not Fukasawa.
- (C) Biomimicry — designing by copying nature structurally; Fukasawa's philosophy is about behavioural intuitiveness, not biological form-copying.

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

Q46.

Solution

Concept: **Jonathan (Jony) Ive** served as Chief Design Officer at Apple Inc. from 1997 to 2019. He led the design teams responsible for many of Apple's most iconic products: the **iMac G3** (1998, translucent coloured plastic), the **iPod** (2001), the **iPhone** (2007), and the **unibody MacBook Pro** (2008, aluminium unibody machined from a single billet). His work combined minimalist industrial design with precision manufacturing and defined contemporary consumer electronics aesthetics.

Step 1: Jony Ive = Apple; iMac G3, iPod, iPhone, unibody MacBook.

Step 2: Option (C) is correct.

Why other options are wrong:

- (A) Braun ET66 calculator and audio equipment — Dieter Rams' work at Braun.
- (B) Herman Miller Aeron chair — designed by Bill Stumpf and Don Chadwick (1994); not Ive.
- (D) Olivetti Valentine typewriter — Ettore Sottsass and Perry King (1969); not Ive.

Answer: (C) **Go Back to Q46**



Q47.

Solution

Concept: Philippe Starck designed the “Juicy Salif” citrus squeezer for Alessi in 1990. The Juicy Salif is one of the most discussed design objects of the late 20th century — its three long, spidery aluminium legs and rocket-like form are provocative and sculptural, prioritising aesthetic impact over pure functionality. Starck famously said it was designed to “start conversations, not squeeze lemons.”

Step 1: Juicy Salif (1990) + Starck = Alessi.

Step 2: Option (B) is correct.

Why other options are wrong:

- (A) Braun — Braun is associated with Dieter Rams; Alessi is the Italian design brand.
- (C) Vitra — Vitra is a Swiss furniture company (produces Eames chairs under licence); Starck’s Juicy Salif is for Alessi.
- (D) Kartell — Kartell (Italian plastics furniture brand) works with Starck (his Louis Ghost Chair), but the Juicy Salif is for Alessi.

Answer: (B) **Go Back to Q47**

Q48.

Solution

Concept: The Olivetti “Valentine” portable typewriter (1969) was designed by the Italian design duo Ettore Sottsass and Perry King. The Valentine became an icon of the Pop Art era — its bright red ABS plastic casing (also available in other colours), compact portable form, and integrated carrying case made it a design cult object. It was intended as an inexpensive, cheerful everyday typewriter for use “anywhere except in an office.”

Step 1: Olivetti Valentine (1969) = Ettore Sottsass + Perry King.

Step 2: Option (A) is correct.

Why other options are wrong:

- (B) Charles and Ray Eames — American designers focused on furniture and films; not the Valentine.
- (C) Arne Jacobsen and Verner Panton — Danish/Scandinavian furniture designers; not Olivetti collaborators.



- (D) Dieter Rams and Richard Fischer — Rams worked at Braun; not the Olivetti Valentine.

Answer: (A) **Go Back to Q48**

Q49.

Solution

Concept: Jasper Morrison (b. 1959, UK) is a leading industrial designer known for his “**Super Normal**” philosophy (developed together with Naoto Fukasawa). Super Normal objects are those that are so quietly correct — so unpretentious, modest, and ordinary-looking — that they blend seamlessly into everyday life. His work avoids novelty for its own sake and instead focuses on archetypal forms refined to near-perfection.

Step 1: Jasper Morrison = “Super Normal” = modest, archetypal, unobtrusive design.

Step 2: Option (C) is correct.

Why other options are wrong:

- (A) High-tech biomorphic design — associated with Ross Lovegrove or Zaha Hadid; not Morrison.
- (B) Postmodern irony and pop-cultural references — Memphis Group / Alessandro Mendini; opposite of Morrison’s understated approach.
- (D) Radical sustainable design with reclaimed materials — a valid design movement, but not Morrison’s primary association.

Answer: (C) **Go Back to Q49**

Q50.

Solution

Concept: Stefan Sagmeister (b. 1962, Austria, based in New York) is a celebrated **graphic designer and typographic artist**. He is famous for provocative, often handmade and body-based typography (e.g. having words carved into his skin for an AIGA poster), his rule-breaking album covers (Rolling Stones, Aerosmith, Lou Reed), and his year-long sabbaticals. He works with **Walsh** (formerly Sagmeister & Walsh). His work blurs the line between fine art and graphic design.

Step 1: Sagmeister = graphic design + typographic art + provocative album



covers.

Step 2: Option (D) is correct.

Why other options are wrong:

- (A) Industrial and furniture design — Sagmeister is a 2D graphic and communication designer.
- (B) Architectural and interior design — Sagmeister's work is primarily in print, branding, and typography.
- (C) Fashion and textile design — Sagmeister has no primary recognition in fashion.

Answer: (D) Go Back to Q50

Part B — Drawing Task Model Answers

Q51.

Solution

Model Sketch Description — Foldable Bicycle Helmet

What the ideal sketch should contain:

- **State (a) — Folded/stored:** The helmet should appear as a flat, compact disc or rectangle — roughly the size of a large book or A4 sheet. The folding panels should be visible as layered or nested segments. The interior padding/liner should be visible as a folded layer within.
- **State (b) — Expanded/worn:** The helmet should show a classic bicycle helmet silhouette — dome-shaped, fitted to the head, with ventilation channels. A head outline below suggests the worn position.
- **Safety features (min. 2):** e.g. (i) *EPS (expanded polystyrene) impact-absorbing inner liner*, visible as a thick layer in expanded state; (ii) *adjustable retention strap with magnetic buckle* under the chin, labelled with an arrow; optional: (iii) *ventilation channels* for airflow, (iv) *MIPS slip-plane system* for rotational impact protection.
- **Folding mechanism:** e.g. *concertina/accordion folding* of a segmented outer shell with flexible joints at each panel boundary; or *hinge system* where two or three panels fold flat; or *collapsing lateral segments* that slide inward. The mechanism must be clearly drawn and labelled.



- **Proportions:** Folded state should be visibly thinner than the expanded helmet, demonstrating a meaningful size reduction.

Marking rubric: Innovation of folding concept (3) + wearability and safety features (3) + labelling (2) + sketch quality (2) = **10 marks**.

Q52.

Solution

Model Sketch Description — 5-Frame Storyboard for Water Conservation Animation

What the ideal sketch should contain:

- **Frame layout:** Five equal frames arranged in a row or two rows, each with a thumbnail sketch area and a one-line action description below it (written neatly in print).
- **Narrative arc (example):**
 - F1** *“A tap left running; water overflowing a full glass.”* — Establishes the problem. Sketch: tap dripping, glass overflowing.
 - F2** *“The wasted water flows down a drain, fishless river below.”* — Shows consequence. Sketch: drain, cracked dry river bed, distressed fish.
 - F3** *“A child turns off the tap; a check mark appears.”* — Introduces the solution. Sketch: hand reaching tap, turning it off.
 - F4** *“Rainwater collected in a barrel; plant watered from it.”* — Demonstrates a conservation technique. Sketch: rain barrel, plant, watering can.
 - F5** *“River refills; fish swim; tagline: Save Water. Save Life.”* — Positive resolution. Sketch: healthy river, fish, smiling family.
- **Visual consistency:** The same character (e.g. a child with a simple silhouette) appears across frames. Line style (thick outline, simple fill) remains consistent.
- **Storyboard completeness:** All 5 frames drawn, all descriptions written.

Marking rubric: Narrative clarity (3) + visual consistency (2) + storyboard completeness (3) + drawing quality (2) = **10 marks**.



Q53.

Solution**Model Sketch Description — Rural Artisan Cooperative Brand Identity****What the ideal sketch should contain:**

- **Logo/brand mark:** A single, self-contained icon in black and white only. Possible concepts: (a) a stylised hand holding a woven/potter's form (hands = human craft); (b) a circular mandala composed of interlinked hand-tool silhouettes (hammer, needle, loom shuttle, wheel); (c) a leaf or lotus form whose veins are replaced by geometric weave patterns. The mark must read clearly at small sizes, with bold lines.
- **B&W strength:** The mark must work with no intermediate grey tones — only pure black and white. Test: if photocopied (100% black), does it still read? Thick outlines and bold fills are safer than fine detail.
- **No typography:** The mark itself contains zero letterforms. A tagline or brand name in text may be shown *below* the mark as a separate element, but not embedded in the icon.
- **Application on cotton bag:** Draw a simple outline of a tote/shopping bag (front face). Place the mark at the upper centre of the bag face, at a scale that is clearly visible. Show approximate proportions.
- **Coherence:** The bag application should demonstrate how the mark scales and maintains clarity when applied to a real surface.

Marking rubric: Originality and concept (3) + B&W visual strength (3) + application coherence (2) + craft (2) = **10 marks**.

Q54.

Solution**Model Sketch Description — Contemporary Art Gallery Facade****What the ideal sketch should contain:**

- **Perspective setup:** A two-point perspective eye-level view (horizon line at roughly mid-height of the facade). Two vanishing points off the page. The building should feel grounded and monumental.
- **Entrance zone:** Clearly readable as the entry — suggested by a large void (recessed porch or glazed double-height atrium), steps leading up, or a cantilevered canopy overhead. Human figures (minimum 2) near the entrance



to establish scale.

- **Display windows or gallery openings:** Tall, frameless glazed panels or cut openings in the facade revealing interior glimpses (artwork silhouettes visible through glass). These should be proportionally large to suggest the gallery's public nature.
- **Signage placement:** Gallery name or logo placement indicated on the facade — either as flush-mounted letters on a solid wall plane, a projecting sign, or an illuminated band.
- **Distinctive architectural feature:** e.g. (i) a *cantilevered box volume* projecting over the entrance; (ii) *perforated metal screen panels* creating a textured outer skin; (iii) a *sculptural roof form* (folded plate or undulating canopy) visible above the parapet; (iv) a *vertical slot window* running the full building height.
- **Atmosphere:** Daylight indicated through shadow rendering on the facade (hatching or directional shading). Trees or planted planters may flank the entrance.

Marking rubric: Architectural expression (3) + perspective accuracy (3) + atmosphere and detail (2) + line quality (2) = **10 marks**.

Q55.

Solution

Model Sketch Description — City Rooftop Garden Scene

What the ideal sketch should contain:

- **Spatial composition (eye-level view):** The rooftop surface is the primary foreground. Use a slight elevated eye level (not bird's eye) so the garden reads as a habitable space, with the city skyline visible behind/above the rooftop parapet. One- or two-point perspective helps establish spatial depth.
- **Planted beds:** Raised rectangular planters containing a variety of plant heights — low groundcover, mid-height shrubs, and at least one tall plant or small tree to create vertical interest. Foliage rendered with varied line weights.
- **Water feature:** A small circular or rectangular fountain, or a narrow water trough/rill running between planters. Suggest water with horizontal parallel lines or ripple marks.



- **Seating:** Benches, moveable chairs, or low platform seating areas. At least one seating zone distinct from the planting zones.
- **Urban backdrop:** The rooftop parapet at mid-height, with surrounding city buildings visible above it — varying heights, window grids, water towers, or communication masts. The contrast between the soft garden foreground and the hard angular urban backdrop is the scene's visual tension.
- **People (minimum 3):** One person seated/reading; one walking through; one interacting with plants or the water feature. Figures should be simply drawn but clearly human, with varied postures to show the space being actively used.
- **Contrast:** Use denser linework and organic, irregular outlines for plant areas; clean geometric lines and regular grids for building surfaces and hard paving.

Marking rubric: Spatial composition (3) + inclusion of required elements (2) + atmosphere and people (3) + rendering (2) = **10 marks**.



Answer Key (Part A — Visual MCQs)

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

