# FDDI AIST Design Aptitude

## Sample Paper – 3

**Duration: 60 Minutes** **Maximum Marks: 50**

### Instructions

- This paper contains **50** Multiple Choice Questions (Single Correct Answer), modelled on the Design Aptitude portion of **FDDI AIST** entrance.
- Each correct answer carries **+1 mark**. There is **no negative marking** for incorrect or unattempted answers.
- Only **one** option is correct. Choose carefully.
- Syllabus: Colour theory, design elements & principles, spatial visualisation, Indian and world art/design history, and footwear/textile materials.
- Use of mobile phones, calculators, or electronic gadgets is strictly prohibited.

**Q1.** In colour theory, a **shade** of a colour is produced by adding _____ to the pure hue.

(A) White

(B) Grey

(C) A complementary colour

(D) Black

**Q2.** An **analogous** colour scheme consists of 2–5 hues that are _____ on the colour wheel.

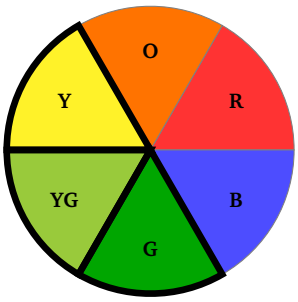
(A) Directly opposite each other

(B) Adjacent or neighbouring

(C) Equally spaced at 120° intervals

(D) Paired as direct complements

**Q3.** The RYB colour wheel below has three segments with **thick borders**. What type of colour harmony do these highlighted hues represent?




(A) Analogous

(B) Triadic

(C) Complementary

(D) Monochromatic

**Q4.** In Johannes Itten's system of colour contrasts, **"contrast of hue"** refers to the juxtaposition of highly saturated, undiluted pure hues. Which of the following scenes best exemplifies this contrast?

(A) Placing a light pink next to a pale lavender

(B) Placing black next to white

(C) Placing intense, fully-saturated red next to fully-saturated blue

(D) Using varying tints of a single green hue side by side

**Q5.** After staring intensely at a patch of bright **red** for 30 seconds and then looking at a plain white wall, a person briefly perceives a patch of which colour?

(A) Green

(B) Blue

(C) Yellow

(D) Violet

**Q6.** Cool colours such as blue, green, and violet have relatively _____ wavelengths compared to warm colours, and in a composition they tend to visually _____.

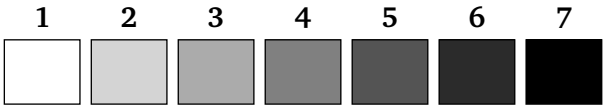
(A) Longer wavelengths; they tend to advance toward the viewer

(B) Shorter wavelengths; they tend to advance toward the viewer

(C) Shorter wavelengths; they tend to recede away from the viewer

(D) Longer wavelengths; they tend to recede away from the viewer

**Q7.** The horizontal strip below shows **seven tonal steps** numbered 1 to 7, graduating from white to black. Which step number represents the **true mid-tone**?




(A) Step 3

(B) Step 4

(C) Step 5

(D) Step 6

**Q8.** In the **additive** (RGB light-mixing) colour model, combining **Red** light and **Blue** light produces:

(A) Cyan

(B) Yellow

(C) Magenta

(D) White

**Q9.** **"Local colour"** in art and design refers to:

(A) The actual perceived colour of an object under neutral, undistorted lighting, without the influence of cast shadows, reflections, or atmospheric effects

(B) The colour an artist invents or exaggerates purely for creative or expressive effect

(C) The apparent colour of an object as seen through a tinted or coloured filter

(D) The dominant hue cast across an entire scene by the prevailing ambient light source

**Q10.** Black, white, and grey are described as _____ colours because they contain no hue.

(A) Tonal

(B) Neutral hue

(C) Primary

(D) Achromatic

**Q11.** As a design principle, **contrast** is best defined as:

(A) The repetition of a single dominant visual element at regular intervals to create an organised rhythm

(B) The juxtaposition of opposing visual qualities — such as light vs. dark, large vs. small, or rough vs. smooth — to create visual interest and emphasise differences

(C) The gradual, step-by-step transition between two similar visual qualities across a composition

(D) The arrangement of visual elements along an invisible axis to achieve a state of equilibrium

**Q12.** The Gestalt law of _____ states that elements sharing visual characteristics such as shape, size, or colour tend to be perceived as belonging to the same group.

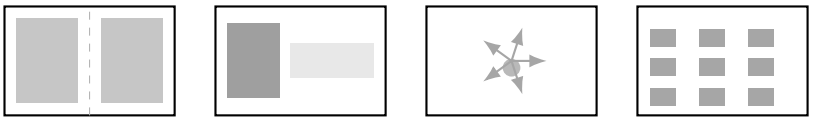
(A) Proximity

(B) Closure

(C) Similarity

(D) Figure-Ground

**Q13.** The four diagrams below illustrate different types of **visual balance**. Which type has **no dominant axis or focal centre**, employing small, identical motifs repeated uniformly across the entire surface?




(A) Type IV — Crystallographic (All-over) balance

(B) Type III — Radial balance

(C) Type II — Asymmetrical balance

(D) Type I — Symmetrical balance

**Q14.** The design principle of _____ ensures a clear visual hierarchy by making one element noticeably stronger than all others, thereby directing the viewer's attention first to the most important area of a composition.

(A) Rhythm

(B) Balance

(C) Proportion

(D) Dominance

**Q15.** The principle of **economy** (visual simplicity) in design holds that:

(A) A successful design should always maximise the number of visual elements used so that its message is communicated as completely as possible

(B) The most effective design uses the minimum number of elements necessary to convey the intended message or achieve the desired aesthetic effect

(C) Visual economy requires that every element in a design be assigned equal visual weight

(D) Simplicity in design means restricting a composition to a single colour and a single typeface

**Q16.** The Gestalt law of _____ describes the tendency of the eye to follow a smooth path or curve, even when that path is interrupted by gaps or breaks.

(A) Proximity

(B) Closure

(C) Continuity

(D) Similarity

**Q17.** In design, **proportion** refers specifically to:

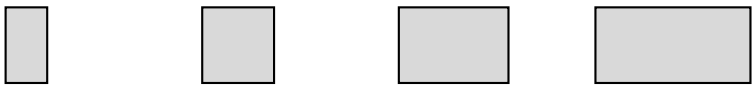
(A) The comparative size relationship between different elements within a composition, or between the parts of a single object

(B) The repetition of visual elements at regular intervals to create a sense of organised movement through a composition

(C) The use of contrasting elements to create a dominant focal point or area of greatest emphasis

(D) The distribution of visual weight across a composition to achieve a state of equilibrium or balance

**Q18.** The diagram below shows a **repeated motif that progressively increases in size** from left to right. Which design principle does this sequence demonstrate?




(A) Symmetry

(B) Rhythm

(C) Contrast

(D) Gradation

**Q19.** A right circular cone is cut by a plane that is perfectly **parallel to its circular base**. What is the shape of the cross-section produced?

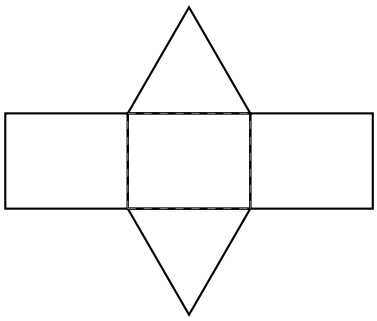
(A) An ellipse

(B) A parabola

(C) A circle

(D) A hyperbola

**Q20.** When the flat **net** shown below is folded along every marked edge, which three-dimensional solid does it form?



(A) A triangular prism

(B) A triangular pyramid (tetrahedron)

(C) A square prism (cuboid)

(D) A pentagonal prism

**Q21.** A square sheet of paper is folded once **along its diagonal** (from one corner to the diagonally opposite corner). What is the shape of the resulting folded piece?

(A) An equilateral triangle

(B) A scalene triangle

(C) A rectangle

(D) A right-angled isosceles triangle

**Q22.** In **third-angle orthographic projection** (used in the United States and Australia), the **top view** of an object is placed:

(A) Directly below the front view

(B) Directly above the front view

(C) To the left of the front view

(D) To the right of the front view

**Q23.** A right circular cylinder is cut by an **oblique plane** (a plane that is neither parallel to the base nor passing through the cylinder's axis). What is the shape of the resulting cross-section?

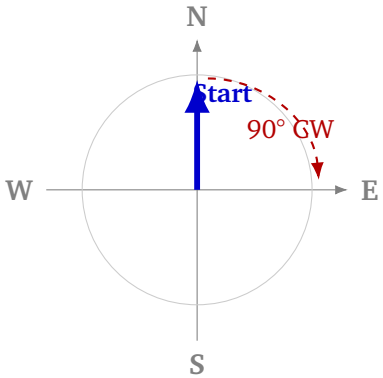
(A) An ellipse

(B) A circle

(C) A parabola

(D) A rectangle

**Q24.** The compass diagram below shows an arrow initially pointing **North**. After rotating the arrow **90° clockwise** (as viewed from above), in which direction does the arrow point?




(A) South

(B) West

(C) East

(D) North-East

**Q25.** A **regular tetrahedron** (a solid with four equilateral-triangle faces) has:

(A) 3 faces, 6 edges, and 4 vertices

(B) 4 faces, 4 edges, and 4 vertices

(C) 6 faces, 8 edges, and 5 vertices

(D) 4 faces, 6 edges, and 4 vertices

**Q26.** When a **cube** is observed from directly above (the plan/top view), what does the outer silhouette look like?

(A) A regular hexagon

(B) A square

(C) A circle

(D) A rectangle

**Q27.** A **silhouette** is best described as:

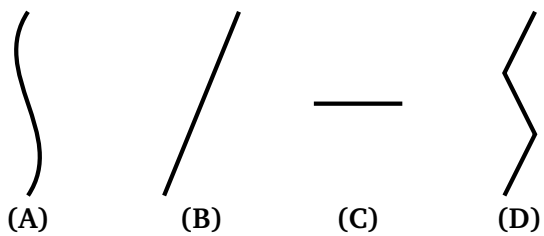
(A) A finely cross-hatched rendering of an object that reveals all its three-dimensional surface texture and volume

(B) A line drawing that captures only the most prominent interior structural details of a form

(C) The filled, solid-dark outline shape of an object that shows its overall form without any interior surface detail, texture, or colour

(D) A tonal study of an object using a graduated scale from pure white through mid-grey to pure black

**Q28.** The four line types below are labelled (A) to (D). Which type most effectively communicates **elegance, grace, and fluid organic movement**?



(A) Line type (A) — the flowing S-curve

(B) Line type (B) — the straight diagonal

(C) Line type (C) — the straight horizontal

(D) Line type (D) — the zigzag

**Q29.** A **contour line** in drawing is defined as:

(A) A short, parallel hatched stroke used to indicate the direction of surface normals on a three-dimensional form

(B) A broken or dashed line indicating edges that are hidden from view in orthographic projection

(C) A series of concentric closed curves used in topographic maps to indicate changes in elevation

(D) A line that traces the outer boundary or silhouette edge of a form, defining its shape without indicating internal surface texture or tonal value

**Q30.** In product and industrial design, **surface texture** serves:

(A) A purely decorative purpose; it has no meaningful influence on the product's functional performance

(B) A dual purpose — it enhances the aesthetic quality of the object and provides functional benefits such as grip, tactile comfort, and ergonomic interaction

(C) An exclusively practical role in camouflaging imperfections introduced during the manufacturing process

(D) An undesirable function that increases production costs and is therefore routinely eliminated in industrial design

**Q31.** A **geometric shape** is distinguished from an organic shape primarily by:

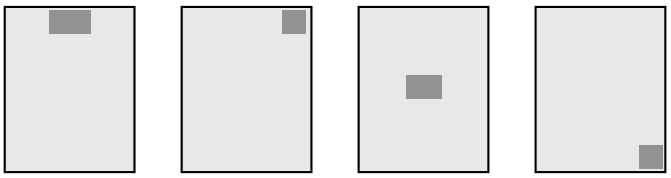
(A) Always being larger in scale than the organic shapes that appear alongside it in a composition

(B) Being exclusively associated with artificial or man-made objects, whereas organic shapes occur only in nature

(C) Having boundaries defined by precise mathematical rules — straight lines, exact angles, or regular mathematical curves — unlike the irregular, freeform edges of organic shapes

(D) Being filled exclusively with flat, uniform colour, whereas organic shapes must be rendered with gradient or tonal fills

**Q32.** Each composition below contains one large **light** rectangle and one small **dark** square. Which composition best demonstrates using the strategic placement of a small-but-heavy element near the **bottom edge** to visually balance a large, light area above it?




(A) Composition I

(B) Composition II

(C) Composition III

(D) Composition IV

**Q33.** In visual composition, **positive space** refers to:

(A) The area occupied by the actual subject or subjects of a composition — the objects, figures, or forms themselves — as opposed to the surrounding background area

(B) The empty background areas that surround and exist between the main subject forms in a composition

(C) The brightest, most fully illuminated region of a composition that draws the viewer's attention first

(D) The central focal point of a composition where the greatest concentration of visual detail is found

**Q34.** The **Ionic order** of Classical Greek architecture is most distinctively identified by a capital featuring:

(A) A plain, undecorated slab (abacus) with no carved ornament whatsoever

(B) Paired scroll-like spirals called **volutes** on either side of a flat cushion (abacus)

(C) Elaborate rows of stylised acanthus leaves surrounding the capital bell

(D) Small cylindrical drum sections (echinus) carved with an egg-and-dart moulding

**Q35.** The **Cubist** art movement, pioneered by Pablo Picasso and Georges Braque around 1907–1914, is principally characterised by:

(A) Capturing fleeting impressions of light and atmosphere using loose, visible brushstrokes and unmixed side-by-side colour

(B) Portraying dreamlike, subconscious imagery drawn from fantasy and the unconscious mind

(C) Using only two or three flat colours with strong black outlines to depict modern urban and industrial subjects

(D) Representing subjects from multiple simultaneous viewpoints on a single flat picture plane, fragmenting forms into geometric facets

**Q36.** **Art Deco**, the decorative-arts style that flourished from the 1920s to the 1940s, is best described by:

(A) Bold geometric forms, rich symmetrical ornamentation, gilded or lacquered surfaces, and the enthusiastic use of modern industrial materials such as chrome, glass, and plastics

(B) Soft, undulating organic curves inspired by plant and flower forms, asymmetrical compositions, and exclusively handcrafted materials

(C) Strict minimalism, industrial materials only, a complete absence of ornamentation, and the doctrine that “form follows function”

(D) A return to Classical Greek and Roman decorative vocabulary, including columns, pediments, and laurel-wreath motifs

**Q37.** **Pattachitra** is a traditional Indian painting style characterised by:

(A) Rajasthani miniature paintings on paper using gold leaf, depicting Mughal court scenes with elaborate borders

(B) Kerala temple murals painted with vegetable pigments on wet lime plaster, depicting scenes from the Ramayana

(C) Intricate cloth-based scroll paintings produced in Odisha (and West Bengal), depicting mythological narratives using natural dyes and finely detailed line work

(D) Karnataka stone-carving panels depicting folk legends and warrior epics in high relief

**Q38.** The Eiffel Tower was designed by engineer Gustave Eiffel and completed in 1889 as:

(A) A permanent monument to the French Revolution, commissioned as a lasting landmark of Paris

(B) A temporary entrance arch and centrepiece for the **World's Fair** (Exposition Universelle) held in Paris

(C) A long-range telecommunications tower designed to broadcast radio signals across continental Europe

(D) A scientific observatory for meteorological research, funded by the French Academy of Sciences

**Q39.** **Kalamkari** is a traditional Indian textile art form that involves:

(A) A silk weaving tradition from Varanasi (Banaras) producing heavily brocaded sarees using gold and silver zari threads

(B) A resist-dyeing technique from Gujarat involving wax applied to fabric before dipping in natural indigo dye

(C) A tie-and-dye fabric tradition from Rajasthan using knotted cloth dipped in successive natural dye baths

(D) Hand-painting or block-printing mythological and floral designs on cotton fabric using natural dyes, originating from Andhra Pradesh (especially Machilipatnam and Srikalahasti)

**Q40.** **Nubuck leather** is created by:

(A) Buffing or sanding the **outer (grain) surface** of full-grain leather to produce a soft, velvety, matte texture, while still retaining the dense outer layer of the hide

(B) Splitting the leather hide at its flesh side and brushing the inner surface to create a suede-like finish

(C) Treating the leather with synthetic polymers that create a high-gloss, patent-like finish

(D) Bonding two or more thin layers of leather together with adhesive to increase thickness and structural durability

**Q41.** **Twill weave** fabric is identified by:

(A) Each weft thread passing alternately over and under every single warp thread, producing a smooth, flat surface with no visible diagonal pattern

(B) Warp threads looping around weft threads to create a rough, open-mesh structure used primarily for canvas and netting

(C) A distinctive **diagonal rib pattern** on the fabric surface, created because each weft thread passes over two or more warp threads before going under one, with the offset advancing by one thread per row

(D) Warp and weft threads twisted together in pairs, creating a coarse, nubby surface texture with very high abrasion resistance

**Q42.** Natural rubber, derived from the latex of *Hevea brasiliensis* trees, is the primary material used for traditional shoe outsoles because:

(A) It is the cheapest synthetic material available for mass-produced footwear manufacturing

(B) It is optically transparent, allowing designers to reveal decorative elements embedded inside the sole

(C) It is extremely rigid, providing maximum ankle support and structural stability for the foot

(D) It provides outstanding grip on varied surfaces, excellent flexibility and flex-crack resistance, and high abrasion resistance

**Q43.** Cotton fibres are composed of:

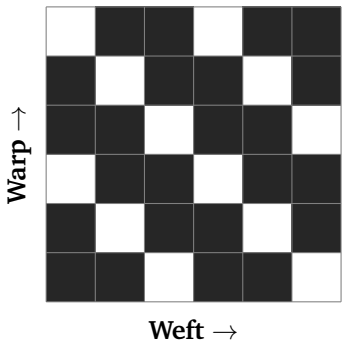
(A) Protein, which gives cotton its natural lustre and inherent wrinkle resistance

(B) **Cellulose**, which makes cotton naturally hydrophilic (absorbing and wicking moisture), breathable, comfortable against the skin, and well-suited to warm-weather clothing

(C) Polyester, which makes cotton highly resistant to staining and dimensionally stable after washing

(D) Keratin, the same structural protein found in hair and wool, which gives cotton both strength and a slight elasticity

**Q44.** The **$6 \times 6$ weave diagram** below shows a diagonal staircase pattern. What type of weave does this pattern represent?




(A) Twill weave

(B) Plain (tabby) weave

(C) Satin weave

(D) Pile (velvet) weave

**Q45.** In the number sequence **2, 6, 12, 20, ___**, the differences between consecutive terms follow a regular pattern. What is the missing term?

(A) 28

(B) 29

(C) 30

(D) 32

**Q46.** Complete the visual analogy:
**Square : Rhombus :: Circle : _____**
(A square is a regular quadrilateral; a rhombus is a slanted/oblique quadrilateral with equal sides. By the same relationship, a circle is to a . . . )

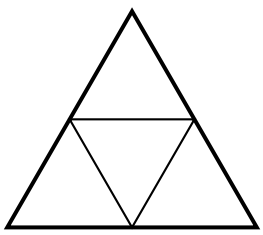
(A) Oval (general term for any egg-shaped curve)

(B) Ellipse

(C) Parabola

(D) Sphere

**Q47.** The large equilateral triangle below has been divided into **four smaller congruent triangles** by connecting the midpoints of each side. Counting triangles of **all sizes** (both small and large), how many triangles are visible in total?



(A) 3

(B) 4

(C) 6

(D) 5

**Q48.** Which of the following capital letters has a **vertical axis of symmetry** (i.e., it is a mirror image of itself when a vertical line is drawn through its centre)?

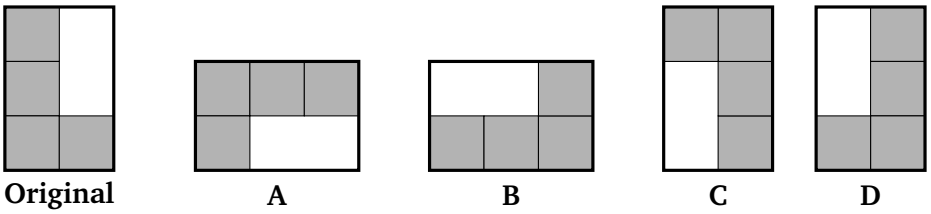
(A) A

(B) B

(C) R

(D) S

**Q49.** The **Original** L-shape is shown at the left. After rotating it **180°** about its centre, which option (A, B, C, or D) shows the correct result?




(A) Configuration A

(B) Configuration B

(C) Configuration C

(D) Configuration D

**Q50.** A square piece of paper is folded in half **from left to right** (first fold), then folded in half again **from top to bottom** (second fold). A single hole is punched through all four layers. When the paper is completely unfolded, how many holes are visible?

(A) 1 hole

(B) 4 holes

(C) 2 holes

(D) 8 holes

## Detailed Solutions

**Q1.**

**Solution**

**Concept — Colour Modification (Shade):** In colour theory, the three basic ways to modify a hue are: adding white (tint), adding grey (tone), and adding black (shade). Each produces a darker, more subdued version of the original hue.

**Step 1 — Identify the term:** A *shade* is specifically the result of mixing black into a pure hue, reducing its lightness while shifting it toward a darker version of that colour.

**Step 2 — Eliminate distractors:** Adding white gives a tint; adding grey gives a tone; adding a complementary colour gives a muted/desaturated mix, not a shade.

**Why other options are wrong:**

- Option A: Adding white produces a *tint*, not a shade.
- Option B: Adding grey produces a *tone*, not a shade.
- Option C: Adding a complementary colour produces a dull, desaturated mixture, not a shade.

**Final Answer:** A shade is made by mixing black into the pure hue. $\Rightarrow$ D

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

**Q2.**

**Solution**

**Concept — Analogous Colour Scheme:** An analogous colour scheme selects hues that sit next to one another on the colour wheel, sharing a common underlying hue, which creates a harmonious and visually cohesive effect.

**Step 1 — Definition:** "Analogous" means similar or closely related; in colour terms, these hues are *adjacent or neighbouring* on the wheel, e.g. red, red-orange, and orange.

**Step 2 — Eliminate distractors:** "Directly opposite" describes a complementary scheme; "equally spaced at 120°" describes a triadic scheme; "paired as direct complements" is another way to describe complementary pairs.

**Why other options are wrong:**

- Option A: Directly opposite hues form a *complementary* scheme.

- Option C: Hues at 120° intervals form a *triadic* scheme.
- Option D: Paired complements form a *complementary* scheme.

**Final Answer:** Analogous hues are adjacent/neighbouring on the colour wheel. $\Rightarrow$ B

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

## Q3.

### Solution

**Concept — Colour Harmony from the Wheel:** The highlighted segments — Yellow (Y), Yellow-Green (YG), and Green (G) — are three hues that sit directly next to one another on the RYB colour wheel. A group of adjacent hues constitutes an analogous colour scheme.

**Step 1 — Count the highlighted segments:** Three consecutive segments are bordered; they share the same region of the wheel with no gaps between them.

**Step 2 — Match to harmony type:** Adjacent segments = analogous. Triadic would require three segments spaced equally at 120°; complementary would require two opposite segments; monochromatic would show tints/tones of a single hue.

**Why other options are wrong:**

- Option B: Triadic requires three segments spaced 120° apart (e.g. R, Y, B).
- Option C: Complementary involves two segments directly opposite each other.
- Option D: Monochromatic uses variations (tints, tones, shades) of a single hue, not multiple distinct hues.

**Final Answer:** Three consecutive wheel segments = analogous harmony. $\Rightarrow$ A

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

## Q4.

**Solution**

**Concept — Itten's Contrast of Hue:** Johannes Itten identified seven colour contrasts in his book *The Art of Color*. "Contrast of hue" specifically requires placing fully saturated, unmixed primary or secondary colours side by side so each hue asserts its maximum chromatic identity.

**Step 1 — Identify the requirement:** The key condition is *full saturation* of both hues — no white, black, or grey mixed in — and the hues must be distinct (not near-neighbours on the wheel).

**Step 2 — Evaluate each option:** (A) pink + lavender are both tints — low saturation, not pure hues; (B) black + white is contrast of value, not hue; (C) intense saturated red + saturated blue perfectly satisfy the full-saturation requirement; (D) varying tints of one hue is a monochromatic/value contrast.

**Why other options are wrong:**

- Option A: Light pink and pale lavender are low-saturation tints, not pure hues — this is contrast of saturation/value, not of hue.
- Option B: Black and white have no hue at all; this is contrast of value (light vs dark).
- Option D: Different tints of a single green exemplify monochromatic value contrast, not hue contrast.

**Final Answer:** Fully-saturated red next to fully-saturated blue exemplifies contrast of hue. $\Rightarrow$ C

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

## Q5.

**Solution**

**Concept — Successive Contrast / After-Image:** When the retina's cone cells are fatigued by prolonged exposure to one colour, they momentarily become less responsive to that colour. On a neutral white surface, the unfatigued cones dominate, creating a brief afterimage in the *complementary* colour.

**Step 1 — Find the complementary of red:** On the RYB (traditional) wheel, the complementary of red is green. On the RGB (additive) wheel, the complementary of red (R) is cyan; however, for the standard subtractive/perceptual model tested here, the accepted answer is green.

**Step 2 — Confirm the after-image mechanism:** The red-sensitive cones tire; when looking at white (which contains all colours), only the green/blue cones respond fully, producing a greenish afterimage.

**Why other options are wrong:**

- Option B: Blue is not complementary to red on the traditional RYB wheel.
- Option C: Yellow is the complement of violet, not red.
- Option D: Violet is the complement of yellow, not red.

**Final Answer:** The after-image of red is green (successive contrast). $\Rightarrow$ A

**Answer: (A)** Go Back to Q5

## Q6.

### Solution

**Concept — Cool Colours: Wavelength and Spatial Effect:** The visible spectrum runs from violet/blue (short wavelength, 380–490 nm) through green, yellow, orange, to red (long wavelength, 620–750 nm). Cool hues have shorter wavelengths; warm hues have longer wavelengths.

**Step 1 — Wavelength:** Blue, green, and violet are in the shorter-wavelength part of the visible spectrum (roughly 380–560 nm), so their wavelengths are *shorter* than warm colours.

**Step 2 — Spatial behaviour:** Cool colours visually recede — they appear to move away from the viewer — while warm colours advance. This is exploited in painting and design to suggest depth.

**Why other options are wrong:**

- Option A: Cool colours have shorter (not longer) wavelengths, and they recede (not advance).
- Option B: Although the "shorter wavelengths" part is correct, cool colours recede rather than advance.
- Option D: Longer wavelengths are characteristic of warm colours (red, orange), not cool ones.

**Final Answer:** Cool colours have shorter wavelengths and tend to recede in a composition. $\Rightarrow$ C

**Answer: (C)** Go Back to Q6

## Q7.

**Solution**

**Concept — Tonal Value Scale:** A seven-step value scale runs symmetrically from white (Step 1) to black (Step 7). The midpoint of a 7-step scale is the 4th step: three steps are lighter, three steps are darker, and Step 4 is the neutral mid-grey.

**Step 1 — Locate the middle:** With steps 1 through 7, the central step is $\lceil 7/2 \rceil = 4$. Steps 1–3 are lighter than mid-tone; Steps 5–7 are darker.

**Step 2 — Confirm using the strip:** Step 4 in the diagram is filled with `black!50`, which is precisely 50% grey — the mathematical mid-tone between white (0%) and black (100%).

**Why other options are wrong:**

- Option A: Step 3 is 33% black — lighter than true mid-tone.
- Option C: Step 5 is 67% black — darker than true mid-tone.
- Option D: Step 6 is 83% black — much darker than mid-tone.

**Final Answer:** Step 4 (50% grey) is the true mid-tone on a seven-step value scale. $\Rightarrow$ $\boxed{\text{B}}$

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

## Q8.

**Solution**

**Concept — Additive Colour Mixing (RGB):** In additive mixing (light sources, monitors), combining two primary lights produces a secondary colour. The three primary lights are Red (R), Green (G), and Blue (B). Their secondary combinations are: R+G = Yellow; G+B = Cyan; R+B = Magenta.

**Step 1 — Apply the rule:** Red light + Blue light = Magenta (a vivid purplish-pink).

**Step 2 — Verify the other pairs:** R+G gives Yellow; G+B gives Cyan; R+G+B together gives White. None of these match red + blue.

**Why other options are wrong:**

- Option A: Cyan is produced by combining Green + Blue, not Red + Blue.
- Option B: Yellow is produced by combining Red + Green, not Red + Blue.
- Option D: White is produced by combining all three primaries (R + G + B) simultaneously.

**Final Answer:** Red + Blue light (additive mixing) produces Magenta. $\Rightarrow$ C

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

## Q9.

### Solution

**Concept — Local Colour in Art:** Local colour (also called *actual colour* or *object colour*) is the inherent, unmodified colour of a surface as it would be perceived under ideal neutral daylight — stripped of all optical influences such as reflections, shadows, or coloured ambient light.

**Step 1 — Core definition:** Local colour is what the object *actually is*, not what it looks like under dramatic or atmospheric lighting. A red apple has a red local colour regardless of whether it is lit by golden sunset light.

**Step 2 — Distinguish from related terms:** Atmospheric or environmental colour changes the *apparent* colour; artistic licence changes the *expressive* colour; filter effects are *induced* colour changes.

**Why other options are wrong:**

- Option B: Colour invented for expressive effect is called *arbitrary* or *expressive* colour, not local colour.
- Option C: The apparent colour through a filter is an optically induced effect, not local colour.
- Option D: Ambient light colour describes the *colour temperature* of the light source, not the inherent object colour.

**Final Answer:** Local colour is the actual perceived colour of an object under neutral, undistorted lighting. $\Rightarrow$ A

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

## Q10.

### Solution

**Concept — Achromatic Colours:** The prefix *a-* means "without"; *chroma* means colour or hue. Achromatic colours are therefore colours that contain *no hue* — they exist only as varying degrees of lightness between white and black, including all greys.

**Step 1 — Apply the term:** Black (maximum dark, no hue), white (maximum

light, no hue), and grey (mixtures of both, no hue) are all achromatic.

**Step 2 — Eliminate the other options:** "Tonal" is a descriptive adjective for any value variation, not a colour category; "neutral hue" is a contradiction in terms; "primary" refers to unmixed base colours (red, yellow, blue or red, green, blue).

**Why other options are wrong:**

- Option A: "Tonal" describes any value range, not the specific category of hue-free colours.
- Option B: "Neutral hue" is contradictory — something that is neutral has no hue by definition.
- Option C: Primary colours are the irreducible base hues used for mixing, which do contain hue.

**Final Answer:** Black, white, and grey are achromatic colours (no hue present). $\Rightarrow$ D

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

## Q11.

### Solution

**Concept — Contrast as a Design Principle:** As a design principle, contrast operates by placing elements with opposing qualities alongside each other — dark next to light, large next to small, rough next to smooth — so that each quality is made more noticeable by comparison with the other.

**Step 1 — Key words in the definition:** "Juxtaposition" (placing side by side) and "opposing visual qualities" are the defining features. The goal is to create *visual interest* and to *emphasise differences*.

**Step 2 — Distinguish from adjacent concepts:** Repetition of a dominant element is *rhythm*; gradual transition is *gradation*; arrangement along an axis is *balance*.

**Why other options are wrong:**

- Option A: Repetition of a dominant element at regular intervals describes the principle of *rhythm*.
- Option C: A gradual step-by-step transition describes *gradation* or *progression*.
- Option D: Arrangement along an invisible axis for equilibrium describes *balance*.

**Final Answer:** Contrast is the juxtaposition of opposing visual qualities to create visual interest. ⇒ B

**Answer: (B)** Go Back to Q11

## Q12.

### Solution

**Concept — Gestalt Law of Similarity:** The Gestalt laws describe how the human visual system automatically groups perceptual elements. The law of *similarity* states that elements that share visual properties — same colour, shape, size, texture, or orientation — are perceived as belonging to the same group even if they are spatially separated.

**Step 1 — Match the description:** "Elements sharing visual characteristics such as shape, size, or colour" perfectly describes similarity — grouping based on shared qualities.

**Step 2 — Distinguish similar laws:** Proximity groups elements by closeness in space; closure is the tendency to complete incomplete forms; figure-ground is the distinction between a subject (figure) and its background (ground).

**Why other options are wrong:**

- Option A: The law of *proximity* groups elements that are physically close to each other, not those sharing visual properties.
- Option B: The law of *closure* describes the tendency to perceive incomplete shapes as complete.
- Option D: *Figure-Ground* is the perceptual segregation of a composition into a foreground subject and a background, not a grouping principle.

**Final Answer:** Elements grouped by shared visual characteristics illustrate the Gestalt law of Similarity. ⇒ C

**Answer: (C)** Go Back to Q12

## Q13.

**Solution**

**Concept — Types of Visual Balance:** Four main types of balance exist: (I) Symmetrical — identical halves on either side of an axis; (II) Asymmetrical — different elements balanced by visual weight; (III) Radial — elements radiating from a centre point; (IV) Crystallographic (all-over) — no focal point or dominant axis, identical motifs repeated uniformly across the surface.

**Step 1 — Identify the type described:** The phrase "no dominant axis or focal centre, small identical motifs repeated uniformly" precisely matches *crystallographic* balance — a pattern fills the surface evenly in every direction.

**Step 2 — Locate it in the diagram:** Diagram IV shows a regular 3×3 grid of small identical squares with no hierarchy, no centre emphasis, and no directional axis — the hallmark of crystallographic balance.

**Why other options are wrong:**

- Option B: Type III (radial) radiates elements from a dominant central point, which is a very clear focal centre.
- Option C: Type II (asymmetrical) has two visually weighted sides balanced across an implied axis.
- Option D: Type I (symmetrical) has a clear axis of reflection, making the axis itself a dominant feature.

**Final Answer:** Crystallographic (all-over) balance in Type IV has no dominant axis or focal centre. $\Rightarrow$ A

**Answer: (A)** Go Back to Q13

## Q14.

**Solution**

**Concept — Dominance as a Design Principle:** Dominance (also called *emphasis*) creates a clear visual hierarchy by designating one element as clearly more prominent than all others. This single element becomes the viewer's entry point into the composition.

**Step 1 — Match key attributes:** "One element visually stronger than all others, directing the viewer's attention first" is the textbook definition of dominance/emphasis.

**Step 2 — Distinguish from related principles:** Rhythm organises movement

through repetition; balance manages visual equilibrium; proportion governs size relationships. None of these specifically create a hierarchy through a single outstanding element.

**Why other options are wrong:**

- Option A: Rhythm describes the ordered repetition of elements to create visual flow, not a hierarchy.
- Option B: Balance is about equilibrium of visual weight across the composition.
- Option C: Proportion deals with size relationships among elements, not with creating a focal point.

**Final Answer:** The design principle that creates hierarchy through one dominant element is Dominance. $\Rightarrow$ D

**Answer: (D)** Go Back to Q14

## Q15.

### Solution

**Concept — Principle of Economy (Visual Simplicity):** Economy in design is rooted in Occam's Razor applied to visual communication: use only as many elements as are necessary to convey the message. Every additional element should justify its presence; unnecessary elements add noise and reduce clarity.

**Step 1 — Core idea:** "Minimum elements necessary" to "convey the intended message" is the central tenet of visual economy. Fewer, carefully chosen elements communicate more powerfully than an overcrowded composition.

**Step 2 — Reject misconceptions:** Economy does *not* mean the fewest absolute elements (one colour, one font) — it means no *unnecessary* elements. It also does not mean all elements must be equal in weight.

**Why other options are wrong:**

- Option A: Maximising elements contradicts economy; clutter obscures the message.
- Option C: Equal visual weight for every element describes a specific kind of balance, not simplicity.
- Option D: Restricting a design to one colour and one font is an over-literal and unnecessarily extreme interpretation of simplicity.

**Final Answer:** Economy holds that the most effective design uses the minimum

elements necessary to achieve its goal. ⇒ B

**Answer: (B)** Go Back to Q15

## Q16.

### Solution

**Concept — Gestalt Law of Continuity:** The law of *continuity* (also called *good continuation*) states that the visual system prefers paths that follow a smooth, uninterrupted trajectory. Even when a line is broken by a gap, the eye continues to follow its implied direction rather than jumping to another element.

**Step 1 — Match the description:** "The tendency of the eye to follow a smooth path or curve, even when that path is interrupted by gaps" is the definition of continuity.

**Step 2 — Distinguish from other Gestalt laws:** Proximity groups nearby elements; closure fills in incomplete outlines; similarity groups visually alike elements. None involve following an implied trajectory across gaps.

**Why other options are wrong:**

- Option A: Proximity groups elements that are *spatially close* — it does not describe following a smooth path.
- Option B: Closure is the tendency to mentally complete incomplete outlines or shapes (e.g. seeing a circle from three arcs).
- Option D: Similarity groups elements sharing visual characteristics, not path-following behaviour.

**Final Answer:** Following a smooth path across gaps is the Gestalt law of Continuity. ⇒ C

**Answer: (C)** Go Back to Q16

## Q17.

### Solution

**Concept — Proportion in Design:** Proportion is the comparative size relationship between elements — how large one element is in relation to another, or how a part relates to the whole. Classical systems such as the Golden Ratio and the Rule of Thirds are tools for achieving pleasing proportional relationships.

**Step 1 — Match the definition:** "Comparative size relationship between different

elements or between parts of a single object" is the standard definition of proportion.

**Step 2 — Distinguish from related principles:** Rhythm involves time-like repetition; contrast creates emphasis; balance manages visual weight distribution. None of these are specifically about size ratios.

**Why other options are wrong:**

- Option B: Repetition of elements at regular intervals to create movement describes the principle of *rhythm*.
- Option C: Using contrasting elements to create a focal point describes *contrast* or *dominance*.
- Option D: Distribution of visual weight to achieve equilibrium describes *balance*.

**Final Answer:** Proportion is the comparative size relationship between elements or parts of a composition. $\Rightarrow$ $\boxed{\text{A}}$

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

## Q18.

### Solution

**Concept — Gradation / Progression:** Gradation (also called progression) is the design principle in which a visual element — size, colour, value, shape, or texture — changes incrementally and steadily from one end of a sequence to the other, creating a sense of movement and depth.

**Step 1 — Identify what is happening in the diagram:** The four rectangles share the same height but each is noticeably wider than the previous one, progressing step by step from narrow to wide. This steady, incremental increase is the essence of gradation.

**Step 2 — Eliminate other principles:** Symmetry requires mirroring; rhythm requires repetition of the same motif at intervals; contrast requires opposing qualities juxtaposed — none describe a smooth incremental change.

**Why other options are wrong:**

- Option A: Symmetry requires mirrored halves, not a progressive size change.
- Option B: Rhythm involves the *repetition* of similar motifs at regular intervals, not a one-directional progression.

- Option C: Contrast requires the pairing of *opposites* (large vs. small) in direct juxtaposition, not a smooth incremental sequence.

**Final Answer:** A motif that progressively increases in size exemplifies the principle of Gradation. $\Rightarrow$ D

**Answer: (D)** Go Back to Q18

## Q19.

### Solution

**Concept — Conic Sections:** When a plane intersects a right circular cone, the shape of the cross-section depends on the plane's angle. A plane parallel to the base slices across all elements of the cone at the same proportional level, producing a circle.

**Step 1 — Apply the rule:** A cut parallel to the circular base is also perpendicular to the cone's axis. Because every generator of the cone makes the same angle with the axis, this cut is equidistant from the axis at every point — producing a *circle*.

**Step 2 — Recall other conic sections:** A cut at an oblique angle (not parallel to base, not through apex) = ellipse; a cut parallel to exactly one generator = parabola; a cut steeper than the generator = hyperbola.

**Why other options are wrong:**

- Option A: An ellipse results from an oblique cut that is not parallel to the base.
- Option B: A parabola results from a cut parallel to exactly one slant side (generator) of the cone.
- Option D: A hyperbola results from a cut parallel to the axis (steeper than the generator).

**Final Answer:** A plane parallel to the base of a cone produces a circular cross-section. $\Rightarrow$ C

**Answer: (C)** Go Back to Q19

## Q20.

**Solution**

**Concept — Nets of 3-D Solids:** A *net* is a flat, unfolded arrangement of all faces of a solid. To identify the solid, count and classify the faces shown in the net and consider how they connect.

**Step 1 — Count the faces in the net:** The net contains three rectangles (the rectangular lateral faces) and two equilateral triangles (the triangular bases). Total: 5 faces — 3 rectangles + 2 triangles.

**Step 2 — Identify the solid:** A solid with two triangular faces and three rectangular lateral faces is a *triangular prism*. The rectangles connect the corresponding edges of the two triangular bases.

**Why other options are wrong:**

- Option B: A tetrahedron has *four* triangular faces and no rectangles.
- Option C: A cuboid (square prism) has six rectangular faces and no triangular faces.
- Option D: A pentagonal prism has two pentagons and five rectangles — seven faces in total.

**Final Answer:** Three rectangles + two equilateral triangles = net of a triangular prism. $\Rightarrow$ A

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

## Q21.

**Solution**

**Concept — Paper Folding Along a Diagonal:** Folding a square along its diagonal means the fold line runs from one corner of the square to its diagonally opposite corner, which divides the square into two congruent triangles.

**Step 1 — Analyse the geometry:** A square has four 90° angles. The diagonal connects two opposite corners, splitting the square into two triangles. Each triangle has one 90° angle (at a corner of the square) and two 45° angles (because the diagonal bisects the two right angles at those corners). This is a right-angled isosceles triangle.

**Step 2 — Confirm dimensions:** If the square has side $s$, the diagonal has length $s\sqrt{2}$. The resulting triangle has legs $s$ and $s$ (isosceles) and hypotenuse $s\sqrt{2}$, with angles 90°–45°–45°.

**Why other options are wrong:**

- Option A: An equilateral triangle has all 60° angles; the folded triangle has a 90° angle.
- Option B: A scalene triangle has all sides and angles different; here two legs are equal.
- Option C: A rectangle requires two folds (folding along a midline, not a diagonal); folding along the diagonal gives a triangle, not a rectangle.

**Final Answer:** Folding a square along its diagonal produces a right-angled isosceles triangle. $\Rightarrow$ D

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

## Q22.

### Solution

**Concept — Third-Angle Orthographic Projection:** In third-angle projection (ANSI/ASME standard, used in the USA and Australia), the object is imagined to be enclosed in a glass box, and the views are unfolded outward. The projection plane is placed *between* the observer and the object.

**Step 1 — Layout rule for third angle:** When the box is unfolded, the top view (plan view) is placed *directly above* the front view, because the top projection plane folds upward away from the front view.

**Step 2 — Compare with first-angle:** In first-angle projection (BS standard, used in Europe and India), the top view is placed *below* the front view, which is the opposite arrangement.

**Why other options are wrong:**

- Option A: "Directly below" is the first-angle projection (European standard) arrangement for the top view.
- Option C: The left side view (left profile) is placed to the left of the front view in third-angle projection.
- Option D: The right side view is placed to the right of the front view in third-angle projection.

**Final Answer:** In third-angle projection, the top view is placed directly above the front view. $\Rightarrow$ B

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

## Q23.

**Solution**

**Concept — Cross-Sections of a Cylinder:** The shape of a cylinder's cross-section depends on the angle of the cutting plane. An oblique plane (one that is neither parallel to the bases nor axial) intersects the cylinder at a varying height, tracing out a closed curve.

**Step 1 — Apply the geometric rule:** An oblique plane cuts through the cylindrical surface at different heights, creating a cross-section whose width equals the cylinder's diameter everywhere but whose height (measured along the axis) varies sinusoidally. This produces an *ellipse*.

**Step 2 — Confirm by limiting cases:** As the oblique angle approaches 0° (parallel to base), the ellipse approaches a circle. As the angle approaches 90° (axial cut), the ellipse degenerates to a rectangle.

**Why other options are wrong:**

- Option B: A circle results only from a cut exactly parallel to the base (not oblique).
- Option C: A parabola is the cross-section of a cone with a specific oblique cut, not of a cylinder.
- Option D: A rectangle results from an axial cut through the cylinder's axis, not from a general oblique plane.

**Final Answer:** An oblique plane cutting a cylinder produces an elliptical cross-section. $\Rightarrow$ $\boxed{\text{A}}$

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

## Q24.

**Solution**

**Concept — Clockwise Rotation and Cardinal Directions:** Cardinal directions are arranged: North (top), East (right), South (bottom), West (left). A clockwise rotation (as seen from above) proceeds N $\rightarrow$ E $\rightarrow$ S $\rightarrow$ W.

**Step 1 — Apply 90° CW to North:** Starting at North (pointing up), rotating 90° in the clockwise direction moves the arrow one quarter-turn to the right, which is *East*.

**Step 2 — Confirm from the diagram:** The curved dashed arrow sweeps from North (12 o'clock position) to East (3 o'clock position), confirming the result.

**Why other options are wrong:**

- Option A: South is 180° CW from North, not 90°.
- Option B: West is 90° *counter*-clockwise from North (or 270° CW), not 90° CW.
- Option D: North-East is only 45° CW from North, not a full 90°.

**Final Answer:** Rotating a North-pointing arrow 90° clockwise results in it pointing East. $\Rightarrow$ C

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

## Q25.

### Solution

**Concept — Euler's Formula and Tetrahedron Geometry:** A regular tetrahedron is the simplest Platonic solid, composed entirely of equilateral triangles. By Euler's polyhedron formula: $V - E + F = 2$.

**Step 1 — Count the elements:** A tetrahedron has 4 triangular **faces**. Each triangle has 3 edges, but each edge is shared by 2 faces, so $E = (4 \times 3)/2 = 6$ **edges**. Each face has 3 vertices, but each vertex is shared by 3 faces, so $V = (4 \times 3)/3 = 4$ **vertices**.

**Step 2 — Verify with Euler's formula:** $V - E + F = 4 - 6 + 4 = 2$. ✓

**Why other options are wrong:**

- Option A: 3 faces, 6 edges, 4 vertices — fails Euler's formula ($3 - 6 + 4 = 1 \neq 2$) and no 3-faced polyhedron exists.
- Option B: 4 faces, 4 edges, 4 vertices — fails Euler's formula ($4 - 4 + 4 = 4 \neq 2$) and is geometrically impossible.
- Option C: 6 faces, 8 edges, 5 vertices — these are the counts for a *triangular prism* ($5 - 9 + 6 = 2$; correct prism has 5V, 9E, 6F — this option is also wrong).

**Final Answer:** A regular tetrahedron has 4 faces, 6 edges, and 4 vertices. $\Rightarrow$ D

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

## Q26.

**Solution**

**Concept — Orthographic View of a Cube:** When any solid is viewed in orthographic projection from a particular direction, the resulting silhouette shows only the outermost profile visible from that direction, with all depth collapsed.

**Step 1 — View from directly above (plan view):** Looking straight down at a cube, you see the top face. The top face of a cube is a perfect square, and the cube's sides are hidden directly beneath it. The outer boundary is a square.

**Step 2 — Consider special views:** If the cube were tilted 45° around the vertical axis before viewing, the silhouette would become a rectangle; if tilted along the body diagonal, it would show a hexagon — but the question specifies "directly above" with no tilt.

**Why other options are wrong:**

- Option A: A regular hexagon is the outline of a cube viewed along its body diagonal — not from directly above.
- Option C: A circle is the plan view of a cylinder, sphere, or cone — not a cube.
- Option D: A rectangle would appear only if the cube were viewed from a tilted (non-perpendicular) top angle or if the solid were a non-square cuboid.

**Final Answer:** A cube viewed from directly above shows a square outer silhouette. $\Rightarrow$ B

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

## Q27.

**Solution**

**Concept — Definition of a Silhouette:** A silhouette is the flat, filled shape of a subject in a single, uniform dark tone (typically black), showing only the external contour and overall form. All internal surface information — texture, colour, shading, and detail — is omitted.

**Step 1 — Key features of a silhouette:** (1) Filled solid dark area, (2) defined by the outer contour only, (3) no interior detail visible, (4) no tonal gradation within the shape.

**Step 2 — Eliminate lookalikes:** A cross-hatched rendering shows surface texture and volume; a detail-line drawing reveals structure; a tonal study shows a range

from white to black with gradients — none of these are silhouettes.

**Why other options are wrong:**

- Option A: Cross-hatching reveals surface texture and three-dimensional form, which a silhouette explicitly excludes.
- Option B: A line drawing with prominent interior structural details is a *structural* or *diagrammatic* drawing, not a silhouette.
- Option D: A tonal study showing a graduated scale from white to black is a value rendering or chiaroscuro study, not a silhouette.

**Final Answer:** A silhouette is the filled solid-dark shape of an object's outline with no internal detail. $\Rightarrow$ C

**Answer: (C)** Go Back to Q27

## Q28.

### Solution

**Concept — Expressive Quality of Line Types:** Different line qualities convey specific visual and emotional messages. A flowing, S-shaped curve (the "line of beauty" as described by William Hogarth) embodies grace, elegance, and organic movement. Diagonal lines suggest dynamism; horizontal lines suggest calm; zigzag lines suggest energy or agitation.

**Step 1 — Match line type to quality:** Elegance, grace, and fluid organic movement are best communicated by a gently undulating S-curve — it mirrors the natural curves found in the human figure, drapery, and flowing water.

**Step 2 — Verify other line associations:** The diagonal (B) conveys movement and direction; the horizontal (C) conveys stillness and stability; the zigzag (D) conveys tension, energy, or instability.

**Why other options are wrong:**

- Option B: Straight diagonals convey *directional movement* or *instability*, not elegance.
- Option C: Horizontal lines communicate *rest* and *stability*, not fluid movement.
- Option D: Zigzag lines convey *agitation*, *energy*, or *conflict*, not grace.

**Final Answer:** The flowing S-curve (Line A) best communicates elegance, grace, and fluid organic movement. $\Rightarrow$ A

**Answer: (A)** Go Back to Q28

## Q29.

### Solution

**Concept — Contour Line in Drawing:** A contour line is the fundamental mark that traces the outer edge of a three-dimensional form onto a two-dimensional surface. It defines shape and boundary, without implying depth, texture, or tonal value.

**Step 1 — Core definition:** A contour line traces the *outer boundary or silhouette edge* of a form. It is the line a draughtsperson draws when following the outermost visible edge of an object with their eye and simultaneously moving a pencil to record it.

**Step 2 — Distinguish from other line types:** Hatching indicates surface normals/tonal value; hidden lines (dashed) indicate concealed edges; topographic lines are elevation contours — none of these trace the visible outer boundary of a drawn form.

**Why other options are wrong:**

- Option A: Short parallel hatched strokes are *hatching* marks used for shading, shadow direction, or section representation.
- Option B: Broken or dashed lines in technical drawing indicate *hidden edges* — edges not visible from the current viewpoint.
- Option C: Concentric closed curves on topographic maps are also called *contour lines* but in cartography, not in the drawing/art context; the question's context is clearly drawing.

**Final Answer:** A contour line traces the outer boundary of a form without indicating texture or tonal value. $\Rightarrow$ D

**Answer: (D)** Go Back to Q29

## Q30.

### Solution

**Concept — Role of Surface Texture in Product Design:** In product and industrial design, surface texture is never purely cosmetic. It simultaneously contributes to aesthetics (appearance, perceived quality, brand character) and to ergonomics/function (grip security, tactile comfort, thermal feel, ease of cleaning).

**Step 1 — Identify the dual role:** A rubber-textured grip on a drill handle is both visually distinctive and functionally essential for safe operation. Similarly, the grain on a leather bag signals quality and provides tactile comfort.

**Step 2 — Reject extreme positions:** Claiming texture is *purely* decorative ignores its functional benefits; claiming it is used *only* to hide defects is a manufacturing excuse, not a design principle.

**Why other options are wrong:**

- Option A: Texture is not purely decorative — it has well-documented functional effects on grip, thermal insulation, and ergonomics.
- Option C: While texture can help conceal minor surface imperfections, this is a secondary manufacturing benefit, not its primary design purpose.
- Option D: Texture does not merely add cost — it adds value through functional improvement and aesthetic enhancement.

**Final Answer:** Surface texture serves a dual purpose — aesthetic and functional — in product design. $\Rightarrow$ $\boxed{\text{B}}$

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

## Q31.

### Solution

**Concept — Geometric vs Organic Shapes:** Geometric shapes are defined by mathematical precision: their edges follow exact rules of straight lines, specific angles, or regular mathematical curves such as circles and ellipses. Organic shapes, by contrast, have irregular, biomorphic boundaries that suggest natural growth and spontaneity.

**Step 1 — Core distinguishing feature:** Precision of boundary definition is the key. Geometric = mathematical rules; organic = freeform/biomorphic boundaries.

**Step 2 — Evaluate claims in each option:** Scale, origin (natural vs artificial),

and fill type are all irrelevant to the fundamental distinction — what matters is whether the boundary follows a mathematical formula.

**Why other options are wrong:**

- Option A: Size has nothing to do with the geometric/organic distinction — an organic shape can be large and a geometric shape tiny.
- Option B: Geometric shapes appear abundantly in nature (crystalline structures, honeycomb, spiral shells); the artificial/natural divide is a popular misconception.
- Option D: Both geometric and organic shapes can be filled with flat colour or gradients — fill type is a rendering choice, not a shape category.

**Final Answer:** Geometric shapes are defined by precise mathematical rules for their boundaries. $\Rightarrow$ C

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

## Q32.

### Solution

**Concept — Visual Balance Through Strategic Placement:** A small, dark (visually heavy) element can balance a large, light (visually light) element when placed at a position of visual leverage. Near the bottom edge of the frame, a heavy element acts like a counterweight because of the composition's implied gravitational tension.

**Step 1 — Identify the target placement:** The question specifies "small-but-heavy near the *bottom edge*". This rules out compositions I (top-centre), II (top-right), and III (centre).

**Step 2 — Verify Composition IV:** Composition IV places the small dark square in the bottom-right corner — close to the bottom edge. This creates a visual anchor that stabilises the large, light rectangle dominating the composition above it.

**Why other options are wrong:**

- Option A: Composition I has the small dark square at the top-centre — it pulls visual weight to the top, not the bottom.
- Option B: Composition II has the small dark square at the top-right corner — it also places weight at the top, not the bottom.
- Option C: Composition III has the small dark square at the centre — it balances vertically but does not use the bottom-edge anchor effect.

**Final Answer:** Composition IV (small dark square at the bottom edge) best demonstrates bottom-anchored balance. $\Rightarrow$ D

**Answer: (D)** Go Back to Q32

## Q33.

### Solution

**Concept — Positive and Negative Space:** In visual composition, space is categorised as either positive (occupied by the subject) or negative (the surrounding empty area). Understanding this duality is fundamental to composition, logo design, and spatial planning.

**Step 1 — Define positive space:** Positive space is the area *occupied by the actual subjects* — the figures, objects, or forms the artist or designer has placed in the composition.

**Step 2 — Define negative space for contrast:** Negative space is the background, the gaps and voids around and between the subjects. Neither "brightest region" nor "most detailed centre" are space categories — they describe focal points and tonal properties.

**Why other options are wrong:**

- Option B: Empty background areas around the subjects are *negative* space, not positive space.
- Option C: The brightest, most illuminated region describes a *highlight* or a focal point, not a spatial category.
- Option D: A central area of maximum detail describes a focal point or point of emphasis, not positive space.

**Final Answer:** Positive space is the area occupied by the actual subjects of a composition. $\Rightarrow$ A

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

## Q34.

**Solution**

**Concept — The Three Classical Greek Orders:** The three orders of Greek architecture are Doric, Ionic, and Corinthian, distinguished primarily by the design of their column capitals. The Ionic capital features two prominent scroll-shaped spirals called *volutes*.

**Step 1 — Identify Ionic capitals:** Ionic columns are slender and elegant; their capitals show a pair of volutes (scroll-like coils) on the left and right, with a flat abacus above and an egg-and-dart moulding on the echinus below.

**Step 2 — Distinguish from Doric and Corinthian:** The Doric capital is the simplest — just a plain circular echinus and square abacus with no scrolls. The Corinthian capital is the most ornate — covered with rows of carved acanthus leaves.

**Why other options are wrong:**

- Option A: A plain, undecorated slab (abacus) with no carving is the hallmark of the *Doric* order, not Ionic.
- Option C: Elaborate rows of acanthus leaves define the *Corinthian* capital, not the Ionic.
- Option D: While some Ionic capitals include egg-and-dart moulding on the echinus, the primary identifying feature is unambiguously the volutes, not the echinus drum.

**Final Answer:** The Ionic order capital is most distinctively identified by its paired scroll-like volutes. $\Rightarrow$ $\boxed{\text{B}}$

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

## Q35.

**Solution**

**Concept — Cubism:** Cubism, developed by Pablo Picasso and Georges Braque from about 1907 (Analytic Cubism) through 1914 (Synthetic Cubism), broke from Renaissance single-point perspective by simultaneously showing multiple viewpoints of a subject within a single pictorial plane, fragmenting forms into angular geometric facets.

**Step 1 — Core Cubist method:** Instead of depicting an object from a single viewpoint, Cubist artists analysed the object from multiple positions simultaneously

and reassembled the fragmented views on the flat canvas.

**Step 2 — Distinguish from other movements:** Impressionism = fleeting light effects; Surrealism = subconscious/dreamlike imagery; the description in option C loosely resembles German Expressionism or graphic poster art, not Cubism.

**Why other options are wrong:**

- Option A: Loose brushstrokes and atmospheric light effects characterise *Impressionism* (Monet, Renoir).
- Option B: Dreamlike subconscious imagery is the hallmark of *Surrealism* (Dalí, Magritte).
- Option C: Flat colour with strong black outlines suggests *Expressionism* or graphic illustration, not Cubism, which uses multiple overlapping grey facets.

**Final Answer:** Cubism represents subjects from multiple simultaneous viewpoints, fragmenting forms into geometric facets. ⇒ D

**Answer: (D)** Go Back to Q35

## Q36.

### Solution

**Concept — Art Deco Style:** Art Deco (from *Arts Décoratifs*, named after the 1925 Paris exposition) is characterised by a fusion of modernism and luxury: bold geometric forms, symmetrical patterns, lavish ornamentation, glamorous materials (chrome, lacquer, gilding), and embrace of industrial-age materials.

**Step 1 — Key Art Deco attributes:** Bold geometry (sunburst, chevron, zigzag motifs), rich surface decoration, symmetry, and glamorous modern materials (chrome, Bakelite, glass, exotic woods) are all defining features.

**Step 2 — Distinguish from adjacent movements:** Art Nouveau (c. 1890–1910) used flowing organic plant-inspired curves; the Bauhaus (1919–1933) promoted functional minimalism with no ornamentation; Neoclassicism revived ancient Greek/Roman forms.

**Why other options are wrong:**

- Option B: Soft organic curves inspired by plant forms and handcraft is *Art Nouveau*, the movement that preceded Art Deco.
- Option C: Strict minimalism, no ornamentation, and "form follows function" are the doctrines of the *Bauhaus* and International Modernism.

- Option D: Classical columns, pediments, and laurel-wreath motifs are hallmarks of *Neoclassicism*.

**Final Answer:** Art Deco is defined by bold geometry, rich ornamentation, gilded surfaces, and modern industrial materials. $\Rightarrow$ A

**Answer: (A)** Go Back to Q36

## Q37.

**Solution**

**Concept — Pattachitra Painting Tradition:** Pattachitra (from Sanskrit *patta* = cloth/canvas and *chitra* = picture) is a traditional scroll or cloth painting associated primarily with Puri (Odisha) and Pingla (West Bengal). Artists use natural stone-based pigments and cow dung / starch paste to create richly detailed mythological compositions.

**Step 1 — Key features of Pattachitra:** Cloth or palm-leaf base; natural mineral and organic dyes; intricate border designs called *nayika*; subjects drawn from the life of Lord Jagannath and Hindu epics; fine, precise line work.

**Step 2 — Eliminate other Indian painting traditions:** Rajasthani miniature paintings use paper, not cloth, and are court-themed; Kerala murals are wall paintings on wet plaster; Karnataka stone-carvings are sculptural, not paintings.

**Why other options are wrong:**

- Option A: Rajasthani miniature paintings are executed on paper (sometimes ivory), not cloth, and typically depict Mughal or Rajput court scenes.
- Option B: Kerala murals (*chitra*) are painted directly on temple walls using lime plaster — they are not cloth-based scrolls.
- Option D: Stone-carving in Karnataka (and across India) is sculpture, not a painting tradition.

**Final Answer:** Pattachitra is the cloth-based scroll painting tradition from Odisha depicting mythological themes. $\Rightarrow$ C

**Answer: (C)** Go Back to Q37

## Q38.

**Solution**

**Concept — The Eiffel Tower and Its Original Purpose:** The Eiffel Tower (Tour Eiffel) was designed by Gustave Eiffel's engineering firm (primarily Alexandre Gustave Eiffel with engineers Émile Nouguier and Maurice Koechlin) and was completed on 31 March 1889 for the *Exposition Universelle* (World's Fair) in Paris, held to celebrate the centennial of the French Revolution.

**Step 1 — Historical context:** The tower was conceived as the entrance arch and main attraction of the 1889 World's Fair. It was always intended as a temporary structure (initially to be demolished in 1909).

**Step 2 — It was not originally permanent:** The tower survived because it proved useful as a radio transmission antenna after 1900. Its permanent status came only later.

**Why other options are wrong:**

- Option A: The tower was not commissioned as a permanent monument to the French Revolution, although the fair it was built for did celebrate the Revolution's centennial.
- Option C: While it has been used for telecommunications, it was not originally designed as a dedicated broadcast tower.
- Option D: It has been used for meteorological experiments, but it was not built as a scientific observatory.

**Final Answer:** The Eiffel Tower was built as the entrance arch and centrepiece for the 1889 Paris World's Fair. $\Rightarrow$ B

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

## Q39.

**Solution**

**Concept — Kalamkari Textile Art:** Kalamkari (from Persian *kalam* = pen and *kari* = craftsmanship/work) is a traditional Indian craft of hand-drawing or block-printing on fabric using natural dyes. The two major centres in Andhra Pradesh are Srikalahasti (hand-drawn, pen-based) and Machilipatnam (block-printed).

**Step 1 — Defining characteristics:** Cotton cloth is treated with natural mordants, then artists hand-paint or print using designs of gods, goddesses, mythological scenes, and floral motifs with natural dyes (tamarind seed paste, harda, cow dung,

myrobalan, etc.).

**Step 2 — Distinguish from other Indian textile crafts:** Banarasi weaving uses gold/silver zari on silk; Gujarati batik uses wax resist; Rajasthani bandhani is tie-and-dye; none of these involve the kalam (pen/block) on cotton with natural dyes.

**Why other options are wrong:**

- Option A: Brocade weaving with gold/silver zari threads on silk is the *Banarasi* (Varanasi) tradition, not Kalamkari.
- Option B: Wax-resist dyeing on fabric with natural indigo describes *batik*, practiced in Gujarat and internationally, not Kalamkari.
- Option C: Tie-and-dye with knotted cloth in successive dye baths is *bandhani* (Rajasthan/Gujarat), not Kalamkari.

**Final Answer:** Kalamkari is hand-painting or block-printing on cotton with natural dyes, from Andhra Pradesh. $\Rightarrow$ D

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

## Q40.

### Solution

**Concept — Nubuck Leather Manufacturing:** Nubuck is a type of top-grain leather produced by buffing or sanding the *outer* (grain/hair) side of full-grain cowhide. This abrasive treatment raises a fine, short nap — a soft, velvety, matte surface similar in feel to velvet or soft suede.

**Step 1 — What makes nubuck distinctive:** Unlike suede (which is produced from the *inner* split layer), nubuck retains the dense grain layer — it is buffed on the outside. This gives it greater durability than suede while retaining a similar soft texture.

**Step 2 — Contrast with related leathers:** Suede = inner flesh side buffed; patent leather = coated with lacquer/polymers for high gloss; bonded leather = layers of scraps bonded together.

**Why other options are wrong:**

- Option B: Splitting and brushing the *flesh (inner) side* produces *suede*, not nubuck. Suede comes from the split lower layer of the hide.
- Option C: Applying synthetic polymers for a glossy finish produces *patent leather* (vernis), not nubuck.

- Option D: Bonding multiple thin layers with adhesive produces *bonded leather* or *reconstituted leather*, not nubuck.

**Final Answer:** Nubuck is made by sanding the outer grain surface of full-grain leather to produce a velvety matte texture. $\Rightarrow$ A

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

## Q41.

### Solution

**Concept — Twill Weave Structure:** In a twill weave, each weft (horizontal) thread is interlaced with a small number of warp (vertical) threads in a systematic offset pattern — passing over two or more warp threads and under one (or vice versa), with the offset advancing by one warp thread in each successive row. This creates the characteristic diagonal rib or twill line on the fabric surface.

**Step 1 — Identify the defining visible feature:** The diagonal rib running across the fabric surface at 45° (or another angle) is the unmistakable signature of all twill weaves — denim, gabardine, herringbone, and tweed are all twill fabrics.

**Step 2 — Contrast with plain weave:** In plain (tabby) weave, each weft thread alternates strictly over and under every single warp thread in every row, producing a simple grid with no diagonal visual bias.

**Why other options are wrong:**

- Option A: Over-one, under-one strict alternation with no offset describes *plain (tabby) weave* — no diagonal rib results.
- Option B: Warp threads looping around weft threads without interlacing describes a leno or gauze weave, used for nets, not a standard twill.
- Option D: Twisted warp-weft pairs producing a coarse, nubby texture describes a *canvas* or *rope twist* construction, not a twill.

**Final Answer:** Twill weave creates a diagonal rib by offsetting the over/under pattern by one thread per row. $\Rightarrow$ C

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

## Q42.

**Solution**

**Concept — Natural Rubber Properties for Footwear Outsoles:** Natural rubber (NR, poly-*cis*-isoprene) possesses a combination of physical properties that make it uniquely suited for shoe outsoles: high coefficient of friction (grip), extreme elasticity (flexibility and recovery), and excellent resistance to abrasion and flex cracking.

**Step 1 — Key functional properties:** (1) Outstanding traction/grip on wet and dry surfaces; (2) excellent flex resistance — can be bent millions of times without cracking; (3) high abrasion resistance — the outsole wears slowly even on rough pavements.

**Step 2 — Why these properties matter:** Shoe outsoles must survive millions of flexion cycles, contact with abrasive surfaces, and provide safe grip — all functions for which natural rubber was the material of choice long before synthetic alternatives existed.

**Why other options are wrong:**

- Option A: Natural rubber is *not* the cheapest option; many synthetic materials (EVA, PVC) are cheaper for mass production.
- Option B: Natural rubber is opaque, not transparent — it is not used to reveal decorative elements.
- Option C: Natural rubber is *flexible*, not rigid — rigidity would be a serious drawback in a shoe sole.

**Final Answer:** Natural rubber is used in outsoles for its outstanding grip, flexibility, and abrasion resistance. $\Rightarrow$ D

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

## Q43.

**Solution**

**Concept — Chemical Composition of Cotton Fibres:** Cotton fibres are natural seed-hair fibres from the *Gossypium* plant. Their primary chemical constituent is *cellulose* — a long-chain polysaccharide (polymer of glucose units) that also makes up wood, linen, and other plant-based fibres.

**Step 1 — Why cellulose matters:** Cellulose is hydrophilic — it readily absorbs water molecules into its structure. This gives cotton its moisture-wicking, breath-

able, and comfort properties, making it ideal for warm-weather apparel.

**Step 2 — Compare with other fibre chemistries:** Protein (keratin) = wool, silk; polyester = synthetic PET; no textile fibre of plant origin is made of polyester or keratin.

**Why other options are wrong:**

- Option A: Protein (specifically keratin or fibroin) is the chemical composition of *animal fibres* — wool, cashmere, silk — not cotton.
- Option C: Polyester is a synthetic petroleum-derived polymer (polyethylene terephthalate), not a natural plant fibre.
- Option D: Keratin is the structural protein of *wool, hair, nails, and feathers* — it is not present in any plant-based fibre such as cotton.

**Final Answer:** Cotton fibres are composed of cellulose, making them hydrophilic, breathable, and comfortable. $\Rightarrow$ B

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

## Q44.

### Solution

**Concept — Identifying Weave Structure from a Diagram:** A weave diagram (also called a point paper or design grid) uses filled squares (where warp floats over weft) and empty squares (where weft floats over warp) to map the interlacing pattern. A diagonal staircase of filled cells is the signature of a *twill weave*.

**Step 1 — Read the pattern:** In the diagram, filled cells advance by one column in each successive row, creating a visual diagonal rib running from lower-left to upper-right. This diagonal advancement is the defining characteristic of all twill weaves.

**Step 2 — Contrast with other weave diagrams:** A plain weave diagram shows a perfect checkerboard with no diagonal; a satin weave shows long, widely spaced floats; a pile weave has loops or cut fibres projecting above the base fabric surface.

**Why other options are wrong:**

- Option B: Plain (tabby) weave shows a strict checkerboard pattern — alternating filled and empty cells in every row and column with no diagonal trend.
- Option C: Satin weave shows a few long, spaced floats in a pattern specifically designed to *avoid* creating a diagonal rib (contrary to twill).

- Option D: Pile (velvet) weave cannot be represented by a simple 2-D grid because it involves an extra set of pile warp threads that form loops above the ground fabric.

**Final Answer:** The diagonal staircase pattern in the weave grid represents a Twill weave. $\Rightarrow$ A

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

## Q45.

### Solution

**Concept — Number Sequence with Second-Order Differences:** The sequence 2, 6, 12, 20, _ is governed by first differences that themselves form an arithmetic sequence.

**Step 1 — Find the first differences:** $6-2=4; \quad 12-6=6; \quad 20-12=8$. The differences are 4, 6, 8 — an arithmetic sequence increasing by 2 each time. The next difference must be $8+2=10$.

**Step 2 — Calculate the missing term:** $20+10=$ **30**.

**Verification:** The sequence can also be written as $n(n+1)$ for $n=1,2,3,4,5$: $1\times2=2,\ 2\times3=6,\ 3\times4=12,\ 4\times5=20,\ 5\times6=30$. ✓

**Why other options are wrong:**

- Option A: 28 would require a difference of only 8 from the previous term (same as the term before) — the difference should increase by 2.
- Option B: 29 is not a product of two consecutive integers and does not fit the second-difference rule.
- Option D: 32 would require a difference of 12, but the rule specifies $+2$ per step (from 8 to 10, not 12).

**Final Answer:** The missing term is 30 (next first difference = 10; $20+10=30$). $\Rightarrow$ C

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

## Q46.

### Solution

**Concept — Shape Analogy: Regularity and Oblique Stretching:** A square is a regular (equal-sided, equal-angled) quadrilateral; a rhombus is a quadrilateral with equal sides but *oblique* angles — it is a square that has been skewed/stretched in one direction while all sides remain equal. The analogy maps this geometric relationship onto curved figures.

**Step 1 — Identify the transformation:** Square $\rightarrow$ Rhombus = a regular shape is "skewed" while preserving some equality constraint. A circle is the regular form of a closed curve. When a circle is stretched in one axis (scaled non-uniformly), it becomes an *ellipse*.

**Step 2 — Confirm the analogy:** Circle = regular ellipse (both axes equal). Ellipse = stretched circle (one axis longer than the other). This maps exactly onto Square (all sides/angles regular) : Rhombus (sides equal, angles skewed).

**Why other options are wrong:**

- Option A: An "oval" is a non-technical term describing any egg-shaped curve; it is not a precise geometric analogue of a rhombus.
- Option C: A parabola is an open conic section — it is not a closed curve analogous to a rhombus (which is closed).
- Option D: A sphere is a three-dimensional solid, not a two-dimensional curve; the analogy operates in 2-D shapes.

**Final Answer:** Circle : Ellipse completes the analogy (circle is a regular ellipse; ellipse is a stretched/oblique circle). $\Rightarrow$ $\boxed{\text{B}}$

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

## Q47.

### Solution

**Concept — Triangle Counting in a Subdivided Figure:** Connecting the mid-points of an equilateral triangle produces 4 smaller congruent triangles. When counting triangles of *all* sizes, both the small sub-triangles and any larger triangles formed by combining them must be included.

**Step 1 — Count small triangles:** There are exactly **4 small** congruent triangles (three pointing upward along the base, one inverted in the centre).

**Step 2 — Count the large triangle:** The original **1 large** outer triangle (made up

of all 4 small ones together) is also a triangle and must be counted.

**Step 3 — Total:** $4$ (small) $+ 1$ (large) $=$ **5** triangles in total.

**Why other options are wrong:**

- Option A: 3 — counts only the three upward-pointing small triangles, missing the inverted central one and the large outer triangle.
- Option B: 4 — counts only the four small triangles, forgetting the large enclosing triangle.
- Option C: 6 — would be the count for the *second iteration* of subdivision (Sierpinski triangle level 2), not this simple first-level diagram.

**Final Answer:** There are 5 triangles in total: 4 small + 1 large. $\Rightarrow \boxed{\text{D}}$

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

## Q48.

### Solution

**Concept — Axes of Symmetry in Capital Letters:** A figure has a vertical axis of symmetry if the left half is a mirror image of the right half when a vertical line is drawn through the centre of the figure.

**Step 1 — Test each option:**

- **A**: The letter A has a triangular peak at the top and two legs spreading symmetrically outward. Its left half is a mirror image of the right half about a vertical line through the apex. **Symmetrical.**
- **B**: The letter B has bumps only on the right side — no vertical symmetry.
- **R**: The letter R has a slanted leg on the lower right — no vertical symmetry.
- **S**: The letter S has an S-shaped curve — it has 180° rotational symmetry but no mirror symmetry about a vertical axis.

**Step 2 — Confirm A:** Reflecting the standard capital letter A about a vertical axis through its apex maps the left leg onto the right leg and vice versa — it is mirror-symmetric.

**Why other options are wrong:**

- Option B: Capital B is symmetric about a *horizontal* axis (the two bumps are reflected top-to-bottom in many typefaces), not a vertical one.
- Option C: Capital R has an asymmetric lower leg extending to the right — it is not symmetrical about any axis.

- Option D: Capital S has point symmetry (180° rotational symmetry) but not bilateral vertical mirror symmetry.

**Final Answer:** The capital letter A has a vertical axis of symmetry. $\Rightarrow$ A

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

## Q49.

### Solution

**Concept — 180° Rotation of an L-Shape:** A 180° rotation maps every point $(x, y)$ of an object to $(-x, -y)$ relative to the centre of rotation, which is equivalent to flipping the shape both left-right *and* top-bottom simultaneously.

**Step 1 — Analyse the Original:** The original L has its vertical stem on the left column (all three rows filled) and the short foot extending to the right at the *bottom* (bottom-right cell also filled). The corner is at the bottom-left.

**Step 2 — Apply 180° rotation:** Flipping left-right moves the stem to the right column. Flipping top-bottom moves the foot to the *top* (bottom becomes top). Result: the vertical stem is now the right column (all three rows filled), and the short foot extends to the left at the *top* (top-left cell also filled). The corner is now at the top-right.

**Step 3 — Match to the diagram:** Option C in the diagram shows exactly this configuration — a reversed, upside-down L (the stem is on the right, the foot projects left at the top).

**Why other options are wrong:**

- Option A: Configuration A shows a 90° CW rotation (horizontal L with foot below on the left) — only a quarter turn.
- Option B: Configuration B shows a 270° CW rotation (horizontal L with foot above on the right) — a three-quarter turn.
- Option D: Configuration D shows a left-right mirror reflection of the original — it is not a rotation.

**Final Answer:** Configuration C matches the Original L rotated 180°. $\Rightarrow$ C

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

## Q50.

**Solution**

**Concept — Paper Folding and Hole Counting:** When a sheet of paper is folded multiple times and a hole is punched through all layers, unfolding reveals one hole at every position that was aligned with the punch hole during the folding process.

**Step 1 — Track the first fold (left to right):** Folding the square in half left-to-right creates 2 layers. A hole punched now would unfold to 2 holes (one on each side of the vertical fold line).

**Step 2 — Track the second fold (top to bottom):** Folding the already-folded piece in half top-to-bottom creates 4 layers total. Punching one hole through all 4 layers means when fully unfolded, the hole appears at 4 symmetric positions — one in each quadrant of the original square.

**Step 3 — Verify by quadrant counting:** Each fold doubles the number of layers; $1$ fold $= 2$ layers; $2$ folds $= 4$ layers; $1$ punch through $4$ layers $= 4$ holes when unfolded.

**Why other options are wrong:**

- Option A: 1 hole would result only if no folds were made before punching.
- Option C: 2 holes would result from only *one* fold before punching.
- Option D: 8 holes would result from *three* folds (creating 8 layers) before punching one hole.

**Final Answer:** Two folds produce 4 layers; one punch through 4 layers yields 4 holes when unfolded. $\Rightarrow$ $\boxed{\text{B}}$

**Answer: (B)** Go Back to Q50

# Answer Key

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