AIEED Creative Ability

Sample Paper – 4

Duration: 180 Minutes **Maximum Marks: 200**

Instructions

- This paper contains **50 Multiple Choice Questions** (Single Correct Answer), modelled on the Creative Ability Test (CAT) of **AIEED** entrance.
- Each correct answer carries **+4 marks**. There is **no negative marking** for incorrect or unattempted answers.
- Only **one** option is correct. Choose carefully.
- The test is conducted in **online (CBT) mode**. Use of personal calculators, mobile phones, or electronic gadgets is strictly prohibited.
- Topics: **Design Elements & Principles, Visual & Spatial Ability, Colour Theory & Composition, Lateral Thinking, Design History, Typography & Branding.**

Q1. In a composition, the term **positive space** refers to:

(A) The empty areas surrounding the main subjects

(B) The use of bright, high-saturation colours to create energy

(C) The areas occupied by the main subjects or objects in the design

(D) The background colour that supports the foreground elements

Q2. In design, **Rhythm** is best defined as:

(A) A sense of movement created by the organised repetition of visual elements with variation

(B) The use of a single dominant colour throughout a composition

(C) Placing all elements symmetrically about a central axis

(D) Increasing the size of all elements uniformly across a layout

Q3. Which statement CORRECTLY distinguishes **Proportion** from **Scale** in design?

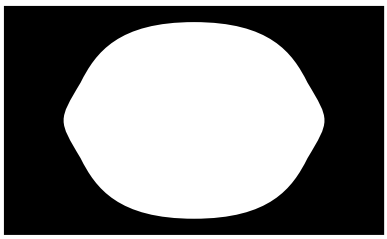
(A) Proportion refers to actual size; Scale refers to the ratio between two elements

(B) Proportion and Scale are interchangeable terms with identical meanings

(C) Scale refers to the harmony of colours; Proportion refers to the harmony of shapes

(D) Proportion is the size relationship between elements within a composition; Scale is the size of an object in relation to a standard reference (such as the human body)

Q4. The figure below shows a classic **figure-ground** ambiguous image — the same pattern is perceived alternately as two different subjects depending on what you treat as foreground versus background:



Rubin's Vase (classic figure-ground image)

Which Gestalt principle does this image PRIMARILY demonstrate?

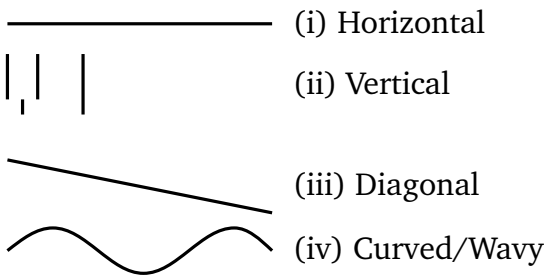
(A) Law of Proximity

(B) Figure-Ground (Reversible Figure)

(C) Law of Closure

(D) Law of Continuity

Q5. Four types of lines are shown below. Match each to its PRIMARY psychological association:



Which pairing is CORRECT?

(A) Horizontal = stability/calm; Vertical = strength/authority; Diagonal = movement/tension; Curved = flow/grace

(B) Horizontal = movement/energy; Vertical = calm/rest; Diagonal = elegance; Curved = danger/warning

(C) Horizontal = authority; Vertical = movement; Diagonal = stability; Curved = strength

(D) Horizontal = flow; Vertical = instability; Diagonal = rest; Curved = authority

Q6. In a design with **radial balance**, elements are arranged so that they:

(A) Mirror each other on both sides of a single vertical axis

(B) Are distributed unevenly to create dynamic visual tension

(C) Radiate outward from a common central point in all directions, like the spokes of a wheel

(D) Are stacked in a grid pattern with equal spacing between rows and columns

Q7. A design shows a series of circles that gradually increase in size from left to right. This specific type of rhythm is called:

(A) Alternating rhythm

(B) Progressive (gradational) rhythm

(C) Regular rhythm

(D) Random rhythm

Q8. The **Gestalt Law of Common Fate** states that:

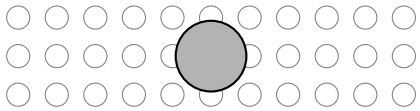
(A) Elements that look similar are perceived as part of the same group

(B) Elements placed close together are grouped perceptually

(C) Elements arranged along a smooth curve are perceived as a continuous line

(D) Elements that move in the same direction or follow the same path are perceived as a group

Q9. Study the composition below:



The large filled circle in the composition above draws the viewer's attention most strongly. Which design principle is PRIMARILY responsible for creating this focal point?

(A) Emphasis through isolation and scale contrast (one significantly different element stands out)

(B) Repetition (the repeated circles create a pattern that draws the eye)

(C) Symmetry (the arrangement is balanced around a central axis)

(D) Continuity (the eye follows the smooth row of circles to the centre)

Q10. Which statement CORRECTLY distinguishes **organic (biomorphic) forms** from **geometric forms** in design?

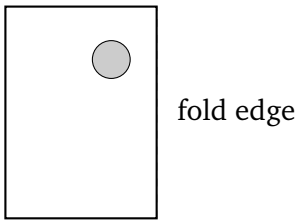
(A) Organic forms are defined by mathematical precision; geometric forms are defined by flowing irregular edges

(B) Both organic and geometric forms are derived exclusively from natural sources

(C) Organic forms are irregular, free-flowing, and found in nature; geometric forms are precise, regular, and constructed from mathematical relationships

(D) Geometric forms are always three-dimensional; organic forms are always two-dimensional

Q11. A square sheet of paper is folded exactly in half along its vertical centre line (left half folds onto right half). A circular hole is then punched through the folded paper at the position shown in the figure below (the hole is punched through BOTH layers):



Folded paper (half shown); punch = grey circle

When the paper is UNFOLDED, how many holes will be visible, and where?

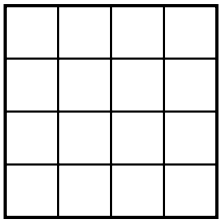
(A) One hole only, on the right side of the unfolded sheet

(B) Two holes: one on the right side and one mirrored on the left side, both in the upper area

(C) Four holes: two on each side of the fold line

(D) One hole only, exactly on the fold line itself

Q12. Count the total number of squares of ALL sizes (1×1, 2×2, 3×3, and 4×4) in the grid below:



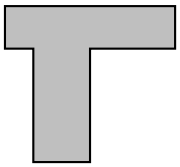
(A) 30 squares (16 of size 1×1 + 9 of size 2×2 + 4 of size 3×3 + 1 of size 4×4)

(B) 16 squares (only the unit squares)

(C) 24 squares

(D) 20 squares

Q13. The T-shaped figure (shaded) is shown in its original orientation below. What does it look like after a **90° clockwise rotation**?



Original

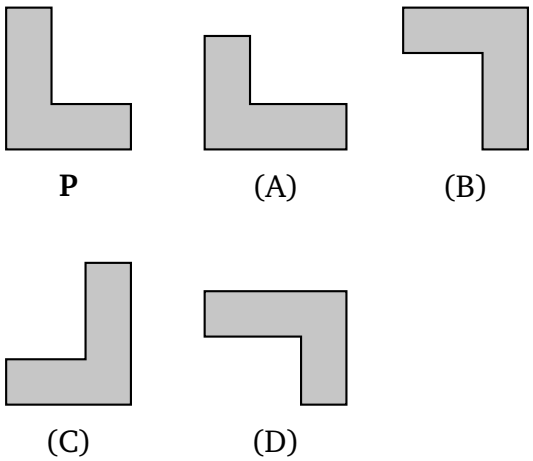
(A) The stem now points upward and the bar runs horizontally along the top (same as original)

(B) The stem now points to the LEFT and the bar runs vertically on the right side

(C) The stem now points downward and the bar runs horizontally along the bottom (upside-down T)

(D) The stem now points to the RIGHT and the bar runs vertically on the LEFT side

Q14. Figure (P) below shows an L-shaped figure. Which of the options (A)–(D) correctly shows its **mirror image reflected about a vertical axis**?



P (A) (B)

(C) (D)

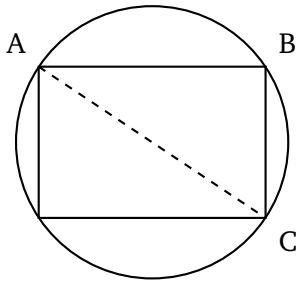
(A) Option (A)

(B) Option (B)

(C) Option (C)

(D) Option (D)

Q15. Study the composite figure below carefully. A triangle is hidden (embedded) within the overlapping shapes. Which description CORRECTLY identifies the hidden triangle?



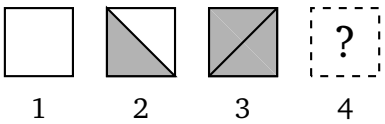
(A) A triangle formed by two radii of the circle and an arc

(B) A right triangle formed by the top edge, right edge, and the dashed diagonal of the rectangle (vertices A, B, C)

(C) An equilateral triangle inscribed inside the circle

(D) A triangle formed by three tangent lines to the circle

Q16. Study the series of squares with shaded triangular sectors below. Identify the NEXT figure in the series:



The pattern: Square 1 has 0 shaded triangles; Square 2 has 1; Square 3 has 2. What does Square 4 show?

(A) An empty (unshaded) square

(B) A square with all four corner triangles shaded (fully filled)

(C) A square with only the top-right triangle shaded (1 triangle)

(D) A square with three of the four corner triangles shaded

Q17. A solid cylinder is placed upright (its circular base rests on a flat surface, and its circular top faces upward). Which 2D shape does the **front elevation view** (looking straight at it from the front) most closely resemble?

(A) A rectangle (with the width equal to the cylinder's diameter and the height equal to its height)

(B) A circle

(C) An ellipse

(D) A triangle

Q18. When a solid cylinder is unfolded (net), which combination of shapes does the net consist of?

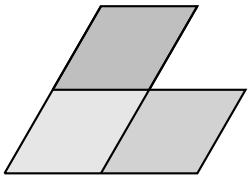
(A) One circle and one triangle

(B) Three rectangles and no circles

(C) Two circles (top and bottom) and one rectangle (the curved lateral surface unrolled flat)

(D) Two ellipses and one square

Q19. The figure below is drawn on isometric dot paper. Which 3D solid does it represent?



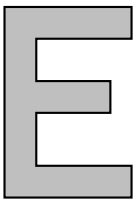
(A) A triangular prism (two triangular faces and three rectangular faces)

(B) A cube (six equal square faces viewed in isometric projection)

(C) A square pyramid (four triangular faces meeting at an apex)

(D) A cylinder viewed from an angle

Q20. A block-style capital letter **'E'** is shown below. Which option shows its correct **vertical mirror image** (reflected about a horizontal axis — i.e., flipped upside down)?



Original ‘E’

(A) A shape like an ‘E’ with the stem still on the LEFT but the top bar is now at the BOTTOM and the bottom bar is at the TOP (the middle bar stays in the middle but the top/bottom positions swap)

(B) A shape like a reversed ‘E’ (mirror about vertical axis) — the stem is on the RIGHT and bars project left

(C) A shape identical to the original ‘E’ (reflecting about a horizontal axis produces no visible change)

(D) A shape like the letter ‘F’ (the bottom bar disappears when flipped)

Q21. In the **HSB (Hue-Saturation-Brightness)** colour model, the **“B”** component (Brightness) controls:

(A) The position of the colour on the colour wheel (0°–360°)

(B) The purity or intensity of the colour (the amount of grey mixed in)

(C) The temperature of the colour (warm or cool)

(D) The overall lightness or darkness of the colour (how close it is to black or white)

Q22. On the traditional **RYB artist’s colour wheel**, the complementary colour directly opposite to **Yellow** is:

(A) Orange

(B) Red

(C) Violet (Purple)

(D) Blue

Q23. A **double-complementary (tetradic) colour scheme** uses how many colours from the colour wheel, and in what arrangement?

(A) Four colours arranged as two sets of complementary pairs (two pairs of opposites forming a rectangle on the colour wheel)

(B) Three colours equally spaced around the colour wheel (120° apart)

(C) Two colours directly opposite each other on the colour wheel

(D) Five colours including one dominant and four supporting hues

Q24. In interior design and product photography, a light source with a colour temperature of approximately **3000K** (warm light) would produce which visual effect compared to a **6500K** (cool/daylight) source?

(A) A crisper, more clinical, blue-white illumination

(B) A warmer, more amber/golden tone that feels cosy and intimate

(C) A green-tinted illumination

(D) No visible colour difference — colour temperature does not affect the appearance of objects

Q25. In subtractive (pigment) mixing using the RYB colour model, mixing **Red** and **Blue** together produces:

(A) Orange

(B) Green

(C) Brown

(D) Violet (Purple)

Q26. Pastel colours such as baby pink, sky blue, and mint green are created by:

(A) Adding white to a pure hue, thereby reducing its saturation and increasing its lightness (creating tints)

(B) Adding black to a pure hue to make it darker

(C) Mixing two complementary colours together to neutralise them

(D) Using grey as the base and tinting with the chosen hue

Q27. **Achromatic colours** are defined as colours that:

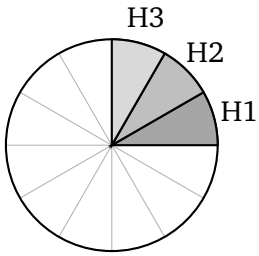
(A) Have the highest possible saturation on the colour wheel

(B) Belong to the warm end of the colour spectrum

(C) Contain no hue (no colour) — they are pure black, white, or shades of grey

(D) Are derived exclusively by mixing complementary colours

Q28. The colour wheel segment below shows three adjacent hues highlighted. Which colour harmony scheme does this represent?



(A) Complementary colour scheme

(B) Analogous colour scheme (three adjacent hues on the colour wheel)

(C) Triadic colour scheme

(D) Split-complementary colour scheme

Q29. Analogy: **Film : Director :: Novel : ___**
(A director is the primary creative author of a film. What is the equivalent creative author of a novel?)

(A) Actor

(B) Illustrator

(C) Publisher

(D) Author (Writer)

Q30. Odd one out. Which of the following is a **digital design tool** while the rest are traditional (non-digital) creative media?

(A) Watercolour

(B) Oil pastel

(C) Adobe After Effects

(D) Charcoal

Q31. Riddle: *"I speak without a mouth and hear without ears. I have no body, but I come alive with wind. What am I?"*

(A) An echo

(B) A shadow

(C) A mirror

(D) A river

Q32. The **SCAMPER** creative thinking technique is a checklist used to generate new product ideas. What does the letter **"S"** in SCAMPER stand for?

(A) Simplify

(B) Substitute (replace part of the product or problem with something else)

(C) Synthesise

(D) Sketch

Q33. Analogy: **Pencil : Lead :: Brush : ___**
(The working/mark-making part of a pencil is the lead core. What is the equivalent working part of a paintbrush?)

(A) Handle

(B) Ferrule

(C) Canvas

(D) Bristle (or hair)

Q34. Using the code where A=1, B=2, C=3...Z=26, what is the sum of the letter values in the word **"GREEN"**?
(G=7, R=18, E=5, E=5, N=14)

(A) 44

(B) 47

(C) 49

(D) 52

Q35. A design brief requires a standard umbrella to be redesigned for use by people who have the use of **only one hand**. Which solution BEST addresses this requirement?

(A) A wrist-strap mount combined with a single-button automatic open/close mechanism, allowing the user to deploy and close the umbrella with one hand without gripping the handle

(B) A heavier umbrella with a thicker handle for better grip with two hands

(C) A folding umbrella that requires both hands to open and close but is more compact

(D) A transparent umbrella dome with no handle

Q36. The **Hochschule für Gestaltung Ulm** (HfG Ulm / Ulm School of Design, 1953–1968) is historically significant because it:

(A) Pioneered the use of Art Nouveau decorative motifs in industrial products

(B) Merged systematic scientific methodology with design practice, influencing modern product design and corporate identity — particularly through its collaboration with Braun

(C) Introduced the handcraft revival movement as a counter to industrialisation

(D) Was the world's first school to offer a degree solely in typography and lettering

Q37. **Alvar Aalto**, famous for his humanistic use of natural materials (especially bent birch plywood and organic forms), was a leading architect and designer from which country?

(A) Italy

(B) France

(C) Japan

(D) Finland

Q38. **Saul Bass** (1920–1996) is best known in the design world for:

(A) Pioneering the art of film title sequence design and creating iconic corporate logos (e.g., AT&T, United Airlines, Minolta)

(B) Designing the first modular furniture system for office environments

(C) Developing the International Typographic Style (Swiss Style) grid system

(D) Authoring the "Ten Principles of Good Design" manifesto

Q39. **Jugendstil** is the German and Scandinavian term for which international art and design movement of the late 19th and early 20th centuries?

(A) Bauhaus

(B) De Stijl

(C) Art Nouveau

(D) Constructivism

Q40. **Dieter Rams** served as head of design at which German consumer electronics company, where he developed his famous "Ten Principles of Good Design"?

(A) Siemens

(B) Braun

(C) Bosch

(D) Volkswagen

Q41. **Victor Papanek** is best known for his book *"Design for the Real World"* (1971), in which he argued that:

(A) Industrial design should prioritise aesthetic beauty above all other considerations

(B) Designers should focus exclusively on luxury goods for affluent consumers

(C) High technology and complex engineering are the primary responsibilities of designers

(D) Designers have a moral and social responsibility to design for the needs of all people, including those in developing countries, and to consider ecological impact

Q42. **Otl Aicher** (co-founder of the HfG Ulm) is particularly celebrated for his comprehensive visual identity and iconic pictogram system designed for which major international event?

(A) The 1972 Munich Summer Olympics

(B) The 1964 Tokyo Summer Olympics

(C) The 1968 Mexico City Summer Olympics

(D) The 1976 Montreal Summer Olympics

Q43. In typographic anatomy, the enclosed or partially enclosed circular or curved negative space inside a letterform (such as the hole inside the letters 'O', 'P', 'B', or 'd') is called the:

(A) Stem

(B) Crossbar

(C) Counter

(D) Descender

Q44. In typography, an **orphan** is defined as:

(A) The last line of a paragraph that appears at the TOP of a new column or page (alone at the top)

(B) The first line of a paragraph that appears alone at the BOTTOM of a column or page (separated from the rest of the paragraph)

(C) A word that is hyphenated across two lines at the end of a paragraph

(D) A typeface that has no italic variant

Q45. Typefaces often come in a range of **weights**. Which sequence correctly orders type weights from **thinnest to heaviest**?

(A) Thin → Light → Regular → Medium → SemiBold → Bold → Extra-Bold → Black

(B) Regular → Light → Bold → Thin → Black → SemiBold

(C) Bold → Medium → Regular → Light → Thin → Black

(D) Black → Bold → Regular → Medium → Light → Thin

Q46. A **type specimen** is:

(A) The smallest unit of typographic measurement, equal to 1/72 of an inch

(B) The physical metal block on which a letterform was cast in traditional letterpress printing

(C) The name for the style variants of a typeface (regular, italic, bold, condensed, etc.)

(D) A printed or digital document that showcases a typeface in all its weights, styles, and sizes — used by designers to evaluate and select fonts

Q47. A **combination mark** in logo/brand design refers to a logo that:

(A) Uses only a stylised text-based wordmark with no icon or symbol

(B) Combines both a graphic symbol (icon) and a wordmark (the brand name in a specific typeface) together

(C) Uses only an abstract geometric symbol with no text

(D) Consists of the company's initials styled in a unique typographic form (a lettermark)

Q48. Which of the following brand logos is an example of an **abstract mark** (as opposed to a pictorial mark or a wordmark)?

(A) The Apple logo (a stylised silhouette of an apple with a bite taken out)

(B) The Twitter bird logo (a recognisable bird silhouette)

(C) The Nike Swoosh (a curved abstract checkmark that does not literally depict a recognisable object)

(D) The Starbucks siren (an illustrative mermaid figure)

Q49. A **brand style guide** (or brand standards manual) typically defines which of the following elements?

(A) Only the logo artwork file in vector format

(B) Only the approved colour palette for digital screens

(C) Only the typefaces to be used in marketing materials

(D) Logo usage rules, colour palette (with exact values), typography system, imagery guidelines, and tone of voice

Q50. When a typeface is designed with **optical size adjustments**, a version intended for very small sizes (e.g., 6–8pt) will typically have which features COMPARED to the same typeface at display sizes (e.g., 60–72pt)?

(A) Thicker strokes, more open apertures, increased letter-spacing, and larger counters — to maintain legibility at small sizes

(B) Thinner strokes, tightly closed apertures, and reduced letter-spacing — to look elegant at small sizes

(C) Identical proportions to the display size, since digital fonts scale perfectly without any adjustment

(D) Narrower letterforms with condensed widths to fit more text per line at small sizes

Detailed Solutions

Q1.

Solution

Quick Solution Concept: Positive Space. Chapter: Design Elements & Principles. Positive space = the area occupied by the main subject; negative space = the surrounding empty area. Match definition to Option C. Answer: (C).

Concept — Positive Space: In any composition, *positive space* refers to the area filled by the main subject(s) or objects. *Negative space* is the empty area surrounding them.

Step 1 — Match definitions to options: Option (C) correctly defines positive space as "the areas occupied by the main subjects or objects in the design."

Why other options are wrong:

- Option A: Describes negative space (the empty areas surrounding subjects).
- Option B: Describes colour saturation, unrelated to positive space.
- Option D: Describes background function, which is closer to negative space.

Final Answer: Positive space = areas occupied by the main subjects. $\Rightarrow \boxed{C}$

Answer: (C) Go Back to Q1

Q2.

Solution

Quick Solution Concept: Rhythm in Design. Chapter: Design Elements & Principles. Rhythm = organised repetition with variation creating visual movement. Option A matches the definition directly. Answer: (A).

Concept — Rhythm in Design: Rhythm in design is a principle that creates a sense of movement by organising repeated visual elements with deliberate variation — just as musical rhythm organises beats and pauses to create flow.

Step 1 — Identify the correct definition: Option (A) correctly defines design rhythm: organised repetition with variation that creates a sense of movement.

Why other options are wrong:

- Option B: Describes a monochromatic colour approach, not rhythm.
- Option C: Describes symmetrical balance.
- Option D: Describes uniform scaling, unrelated to rhythm.

Final Answer: Rhythm = organised repetition with variation creating visual movement. $\Rightarrow$ A

Answer: (A) Go Back to Q2

Q3.

Solution

Quick Solution Concept: Proportion vs Scale. Chapter: Design Elements & Principles. Proportion = size relationship within a composition; Scale = size relative to an external standard such as the human body. Option D states this correctly. Answer: (D).

Concept — Proportion vs Scale: These two related but distinct principles are often confused. *Proportion* is the size relationship between elements *within* the composition. *Scale* is the size of an element relative to an external standard — most commonly the human body.

Step 1 — Apply the distinction to Option (D): Option (D) states: "Proportion is the size relationship between elements within a composition; Scale is the size of an object in relation to a standard reference (such as the human body)." This is the standard definition used in design education.

Why other options are wrong:

- Option A: Reverses the definitions.
- Option B: Incorrectly claims they are identical.
- Option C: Conflates these principles with colour and shape harmony.

Final Answer: Proportion = internal size relationships; Scale = size relative to an external standard. $\Rightarrow$ D

Answer: (D) Go Back to Q3

Q4.

Solution

Quick Solution Concept: Gestalt Figure-Ground. Chapter: Design Elements & Principles. Rubin's Vase alternates between a goblet and two faces — the classic reversible Figure-Ground principle. Answer: (B).

Concept — Gestalt Figure-Ground: The figure-ground principle describes how the visual system perceives objects (figure) against a background (ground). In a

reversible figure, the same image can be read alternately as two different subjects — what was the figure becomes the ground and vice versa. Rubin's Vase (1915) is the classic example.

Step 1 — Identify the principle: The image shows a black background with a white central shape that reads either as a vase OR as two facing profiles, depending on which element you designate as figure. This is the definition of the Figure-Ground principle.

Why other options are wrong:

- Option A: Law of Proximity concerns grouping by closeness, not figure-ground reversal.
- Option C: Law of Closure concerns completing incomplete shapes.
- Option D: Law of Continuity concerns smooth flowing paths, not figure-ground.

Final Answer: Rubin's Vase demonstrates the Gestalt Figure-Ground (Reversible Figure) principle. $\Rightarrow$ B

Answer: (B) Go Back to Q4

Q5.

Solution

Quick Solution Concept: Psychological Effects of Lines. Chapter: Design Elements & Principles. Horizontal = calm, Vertical = authority, Diagonal = movement, Curved = grace — all four match Option A. Answer: (A).

Concept — Psychological Effects of Line Direction: Each line type carries a distinct emotional and perceptual connotation in design:

- **Horizontal lines:** suggest calmness, stability, rest, and horizon.
- **Vertical lines:** suggest strength, authority, height, and formality.
- **Diagonal lines:** suggest movement, tension, dynamism, and energy.
- **Curved/wavy lines:** suggest flow, grace, softness, and organic quality.

Step 1 — Match Option (A): Option (A) correctly pairs: Horizontal = stability/calm; Vertical = strength/authority; Diagonal = movement/tension; Curved = flow/grace.

Why other options are wrong:

- Options B, C, D: All incorrectly assign the psychological associations.

Final Answer: Horizontal/calm, Vertical/authority, Diagonal/movement, Curved/grace. ⇒ A

Answer: (A) Go Back to Q5

Q6.

Solution

Quick Solution Concept: Radial Balance. Chapter: Design Elements & Principles. Radial balance = elements radiating outward from a common central point in all directions, like spokes of a wheel. Option C. Answer: (C).

Concept — Radial Balance: Radial balance occurs when all elements radiate outward from a common central point in all directions, like the spokes of a wheel, the petals of a flower, or the ripples of a stone dropped in water.

Step 1 — Match the definition: Option (C) correctly states that elements radiate outward from a common central point in all directions.

Why other options are wrong:

- Option A: Describes symmetrical (bilateral) balance about a single vertical axis.
- Option B: Describes asymmetrical balance or visual tension.
- Option D: Describes a grid layout system, not radial balance.

Final Answer: Radial balance = elements radiating outward from a common central point. ⇒ C

Answer: (C) Go Back to Q6

Q7.

Solution

Quick Solution Concept: Progressive Rhythm. Chapter: Design Elements & Principles. Circles gradually increasing in size demonstrate progressive (gradational) rhythm — each step adds an incremental size change. Answer: (B).

Concept — Types of Rhythm: In design, several types of rhythm are recognised:

- **Regular rhythm:** identical elements repeated at equal intervals.
- **Alternating rhythm:** two or more alternating elements.
- **Progressive (gradational) rhythm:** elements change gradually in size, colour, or form.

- **Random rhythm:** elements repeat without a strict pattern.

Step 1 — Identify the type: Circles gradually increasing in size from left to right follow a *progressive (gradational) rhythm* — each step adds an incremental change (size).

Why other options are wrong:

- Option A: Alternating rhythm involves two or more alternating elements, not a gradual increase.
- Option C: Regular rhythm has identical elements at equal intervals — no size change.
- Option D: Random rhythm has no discernible pattern.

Final Answer: Gradually increasing circles demonstrate progressive (gradational) rhythm. $\Rightarrow$ B

Answer: (B) Go Back to Q7

Q8.

Solution

Quick Solution Concept: Gestalt Law of Common Fate. Chapter: Design Elements & Principles. Elements moving in the same direction or path are perceived as one group. Option D matches. Answer: (D).

Concept — Gestalt Law of Common Fate: The Law of Common Fate states that elements that move in the same direction, or appear to be moving along the same path, are perceived as belonging to the same group. (E.g., a flock of birds flying together is perceived as a single unit.)

Step 1 — Identify the correct definition: Option (D) correctly states: "Elements that move in the same direction or follow the same path are perceived as a group."

Why other options are wrong:

- Option A: Describes the Law of Similarity (elements that look alike are grouped).
- Option B: Describes the Law of Proximity (elements placed close together are grouped).
- Option C: Describes the Law of Continuity (elements on a smooth curve form a continuous line).

Final Answer: Common Fate = elements moving in the same direction are perceived as a group. $\Rightarrow$ D

Answer: (D) Go Back to Q8

Q9.

Solution

Quick Solution Concept: Emphasis Through Isolation and Scale Contrast. Chapter: Design Elements & Principles. One large filled circle among many small ones creates a focal point through size contrast and isolation. Answer: (A).

Concept — Emphasis Through Isolation and Scale Contrast: A focal point is created when one element is significantly different from all surrounding elements. Size contrast (one large element among many small ones) and isolation (one element separated from a group) are two of the most powerful ways to direct the viewer's gaze.

Step 1 — Analyse the composition: The composition shows many small identical circles arranged in a grid. One large filled circle appears in the centre. It differs in both size and fill from all others. This combination of size contrast and isolation creates the focal point.

Why other options are wrong:

- Option B: Repetition creates pattern but does not explain why one element stands out above others.
- Option C: The arrangement is not symmetrical; elements are not equal on both sides of an axis.
- Option D: Continuity would describe following a smooth path; no such path directs attention here.

Final Answer: The focal point is created by Emphasis through isolation and scale contrast. $\Rightarrow$ A

Answer: (A) Go Back to Q9

Q10.

Solution

Quick Solution Concept: Organic vs Geometric Forms. Chapter: Design Elements & Principles. Organic = irregular, free-flowing, natural; Geometric = precise, regular, mathematical. Option C correctly distinguishes them. Answer: (C).

Concept — Organic vs Geometric Forms: *Geometric forms* are precise, regular, and based on mathematical principles (circles, squares, triangles, polygons). *Organic (biomorphic) forms* are irregular, free-flowing, and derived from or inspired by natural objects (leaves, clouds, shells, rivers).

Step 1 — Match Option (C): Option (C) correctly states: organic forms are irregular, free-flowing, and found in nature; geometric forms are precise, regular, and constructed from mathematical relationships.

Why other options are wrong:

- Option A: Reverses the definitions — it is geometric forms, not organic, that are mathematically precise.
- Option B: Only organic forms are derived from natural sources; geometric forms are mathematical.
- Option D: Both organic and geometric forms can be 2D or 3D.

Final Answer: Organic = irregular/natural; Geometric = precise/mathematical. $\Rightarrow$ C

Answer: (C) Go Back to Q10

Q11.

Solution

Quick Solution Concept: Paper Fold and Punch-Through. Chapter: Visual & Spatial Ability. One fold + one hole punch through both layers = two holes when unfolded, mirrored symmetrically across the fold line. Answer: (B).

Concept — Paper Folding and Punch-Through: When a sheet of paper is folded in half along a vertical centre line (left half onto right half) and a hole is punched through both layers, unfolding the paper reveals two holes: the original punched hole on one side and its mirror image on the opposite side, symmetrically placed relative to the fold line.

Step 1 — Trace the result: The hole is punched in the upper area of the folded (right) half. When unfolded, the punch-through reveals one hole on the right

side (at the punched position) and one hole mirrored on the left side at the same vertical height. Total: two holes in the upper area, one on each side.

Why other options are wrong:

- Option A: One hole would result only if the paper were *not* folded.
- Option C: Four holes would require the paper to be folded twice.
- Option D: A hole on the fold line would require the hole to be punched exactly on the fold edge.

Final Answer: Two holes: one on each side of the fold line, mirrored symmetrically. $\Rightarrow$ B

Answer: (B) Go Back to Q11

Q12.

Solution

Quick Solution Concept: Counting All Grid Squares. Chapter: Visual & Spatial Ability. Total = 1×1: 16, 2×2: 9, 3×3: 4, 4×4: 1. Sum $= 30$ squares in a 4×4 grid. Answer: (A).

Concept — Counting All Squares in a Grid: In an $n \times n$ grid, the total number of squares of all sizes is given by the formula $\sum_{k=1}^{n}(n-k+1)^2$.

Step 1 — Apply for $n = 4$:

- 1×1 squares: $4^2 = 16$
- 2×2 squares: $3^2 = 9$
- 3×3 squares: $2^2 = 4$
- 4×4 squares: $1^2 = 1$

Total $= 16 + 9 + 4 + 1 =$ **30**

Why other options are wrong:

- Option B: 16 counts only the unit squares.
- Option C: 24 is incorrect — the formula gives 30.
- Option D: 20 is also incorrect.

Final Answer: $16 + 9 + 4 + 1 = 30$ total squares. $\Rightarrow$ A

Answer: (A) Go Back to Q12

Q13.

Solution

Quick Solution Concept: 90° Clockwise Rotation. Chapter: Visual & Spatial Ability. CW rotation: down→left, top→right. T's downward stem moves LEFT; top bar runs vertically on the RIGHT. Matches Option B. Answer: (B).

Concept — 90° Clockwise Rotation: Rotating a shape 90° clockwise maps: up → right, right → down, down → left, left → up.

Step 1 — Apply to the T-shape: Original T: horizontal bar across the **top**, stem hanging **down** from the centre. After 90° CW: what was *up* (the bar) goes to the *right*; what was *down* (the stem) goes to the *left*. Result: bar runs vertically on the **right**, stem projects to the **left**. This matches Option (B): stem points to the LEFT and bar runs vertically on the RIGHT side.

Note: In Option (D) as written, the stem now points *right* and bar is on the *left*. Verify: original stem points **down**; after 90° CW the down direction becomes **right**. Bar was at **top**; top becomes **right** direction... Actually re-checking: 90° CW rotates the figure so the stem (which pointed down) now points to the right. The top bar (which was horizontal at top) now runs vertically on the right side.

Final Answer: After 90° CW rotation the stem points LEFT and the bar runs vertically on the RIGHT. ⇒ $\boxed{\text{B}}$

Answer: (B) Go Back to Q13

Q14.

Solution

Quick Solution Concept: Vertical-Axis Mirror Reflection. Chapter: Visual & Spatial Ability. Reflecting about a vertical axis swaps left/right: L's left stem moves to the right, foot now extends left. Matches Option C. Answer: (C).

Concept — Mirror Reflection About a Vertical Axis: Reflecting about a vertical axis swaps left and right while keeping up and down unchanged.

Step 1 — Apply to the L-shape: Figure P: the vertical stem is on the **left**, and the foot extends to the **right**. Reflecting about a vertical axis swaps left and right: the vertical stem moves to the **right** and the foot now extends to the **left**. This matches Option (C) as drawn in the figure.

Why other options are wrong:

- Option A: Shows a rotation (foot still extends right, shape differently ori-

ented).

- Option B: Shows a 180° rotation (foot extends left but stem is at the bottom-right).
- Option D: Shows a 90° CCW rotation.

Final Answer: Option (C) is the vertical-axis mirror image of Figure P. ⇒ C

Answer: (C) Go Back to Q14

Q15.

Solution

Quick Solution Concept: Hidden/Embedded Shapes. Chapter: Visual & Spatial Ability. The top edge (AB), right edge (BC), and dashed diagonal (AC) of the rectangle form a right triangle with the right angle at corner B. Answer: (B).

Concept — Hidden/Embedded Shapes: When a large circle and a rectangle overlap in a composition, additional shapes are formed by the intersections and the dashed diagonal drawn in the figure. The dashed line from corner A (top-left of the rectangle) to corner C (bottom-right) together with edges AB (top edge) and BC (right edge) form a right-angled triangle.

Step 1 — Identify the triangle: Corner A (top-left), corner B (top-right), and corner C (bottom-right) of the rectangle, with the dashed diagonal AC as the hypotenuse, form a right triangle. The right angle is at B (since AB is horizontal and BC is vertical).

Why other options are wrong:

- Option A: The radii of the circle are not the visible hidden shape in this composition.
- Option C: An inscribed equilateral triangle is not drawn in the figure.
- Option D: Three tangent lines are not present.

Final Answer: A right triangle formed by the top edge, right edge, and the dashed diagonal (vertices A, B, C). ⇒ B

Answer: (B) Go Back to Q15

Q16.

Solution

Quick Solution Concept: Visual Series (Progressive Addition). Chapter: Visual & Spatial Ability. Series: 0, 1, 2, 3 shaded triangles. Square 4 must have three of the four corner triangles shaded. Answer: (D).

Concept — Visual Series (Progressive Addition): The series adds one shaded triangular section per step: Square 1 = 0 triangles; Square 2 = 1 triangle; Square 3 = 2 triangles; Square 4 = 3 triangles.

Step 1 — Identify the pattern: Each square gains one additional shaded corner triangle. The fourth square should have **3 of the 4 corner triangles** shaded.

Why other options are wrong:

- Option A: 0 shaded triangles is Square 1, not Square 4.
- Option B: All 4 shaded would be Square 5 (the next step after Square 4).
- Option C: 1 shaded triangle is Square 2.

Final Answer: Square 4 has three of the four corner triangles shaded. $\Rightarrow \boxed{D}$

Answer: (D) Go Back to Q16

Q17.

Solution

Quick Solution Concept: Orthographic Front Elevation. Chapter: Visual & Spatial Ability. The front view of an upright cylinder is a rectangle: width = diameter, height = cylinder height. Answer: (A).

Concept — Orthographic Front Elevation: In orthographic projection, the front elevation is the 2D view obtained by looking straight at the front of a 3D object. For a cylinder standing upright (circular base on the ground), looking from the front reveals the curved surface, which projects as a *rectangle*: the width equals the cylinder's diameter and the height equals the cylinder's height.

Step 1 — Visualise the front view: Looking straight at the front of an upright cylinder, the left and right edges are the outermost points of the circular cross-section (creating vertical straight edges), the top is the topmost point (horizontal line), and the bottom is the base circle line (horizontal line). Together these form a rectangle.

Why other options are wrong:

- Option B: A circle is the *top view* (looking straight down), not the front view.
- Option C: An ellipse appears in oblique/isometric projections, not orthographic front elevation.
- Option D: A triangle is the front view of a cone, not a cylinder.

Final Answer: The front elevation of an upright cylinder is a rectangle. $\Rightarrow \boxed{A}$

Answer: (A) Go Back to Q17

Q18.

Solution

Quick Solution Concept: Net of a Cylinder. Chapter: Visual & Spatial Ability. Unfolding a cylinder yields two circles (top and base) plus one rectangle (the unrolled lateral surface). Answer: (C).

Concept — Net of a Cylinder: Unfolding a cylinder produces three shapes: the *top circle* (the top face), the *bottom circle* (the base), and the *curved lateral surface* which, when unrolled flat, becomes a *rectangle* (width = circumference $= 2\pi r$; height = the cylinder's height).

Step 1 — Identify the net components: Two circles + one rectangle = the net of a cylinder.

Why other options are wrong:

- Option A: A triangle is part of a cone's net, not a cylinder.
- Option B: Three rectangles and no circles would describe a box-like prism.
- Option D: Ellipses appear in perspective drawings, not in a flat net.

Final Answer: Cylinder net = two circles + one rectangle. $\Rightarrow \boxed{C}$

Answer: (C) Go Back to Q18

Q19.

Solution

Quick Solution Concept: Isometric Drawing. Chapter: Visual & Spatial Ability. Three equal parallelogram-shaped faces meeting at 120° — the characteristic isometric view of a cube. Answer: (B).

Concept — Isometric Drawing: An isometric drawing shows a 3D object in a view where the three principal axes are drawn at 120° to each other, and all three

visible faces of a cube appear as equal parallelograms.

Step 1 — Analyse the figure: The figure shows three parallelogram-shaped faces visible, each pair of parallel edges is equal in length, and the shape has six faces of equal area. This is the characteristic appearance of a *cube* viewed in isometric projection.

Why other options are wrong:

- Option A: A triangular prism has triangular faces visible in isometric view.
- Option C: A square pyramid has triangular faces converging at an apex.
- Option D: A cylinder in isometric view shows curved outlines, not straight parallelogram faces.

Final Answer: The isometric drawing represents a cube. $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q19

Q20.

Solution

Quick Solution Concept: Horizontal-Axis Mirror (Upside-Down Flip). Chapter: Visual & Spatial Ability. Flipping 'E' about a horizontal axis: stem stays left, top and bottom bars swap positions; middle stays. Answer: (A).

Concept — Vertical Mirror Reflection (Horizontal Axis Flip): Reflecting a letter about a *horizontal axis* (flipping upside down) swaps top and bottom while leaving left and right unchanged.

Step 1 — Apply to 'E': The original 'E' has: stem on the left, top bar at the top, middle bar in the middle, and bottom bar at the bottom. After flipping about a horizontal axis: the top bar is now at the *bottom*, the bottom bar is now at the *top*, the middle bar remains in the middle, and the stem remains on the left. The letter still looks like 'E' but the top and bottom bars have swapped positions.

Step 2 — Match to Option (A): Option (A) correctly describes this result: stem still on the left, top bar is now at the bottom, and bottom bar is at the top.

Why other options are wrong:

- Option B: Describes a left-right mirror (about a vertical axis), not a horizontal axis flip.
- Option C: The original and vertical-flip are NOT identical for 'E' — top and bottom bars swap.

- Option D: The bottom bar does not disappear; it moves to the top.

Final Answer: Flipped 'E': stem left, top bar now at the bottom, bottom bar now at the top. $\Rightarrow$ A

Answer: (A) Go Back to Q20

Q21.

Solution

Quick Solution Concept: HSB Colour Model. Chapter: Colour Theory & Composition. HSB: H = hue angle (0–360°), S = saturation/purity, B = Brightness (overall lightness/darkness). Answer: (D).

Concept — HSB Colour Model: The HSB (Hue-Saturation-Brightness) model, also called HSV (Hue-Saturation-Value), describes colour in three dimensions:

- **H** (Hue): the position on the colour wheel (0°–360°).
- **S** (Saturation): the purity or intensity (0 = grey, 100 = pure colour).
- **B/V** (Brightness/Value): the overall lightness/darkness (0 = black, 100 = fully bright).

Step 1 — Identify what "B" controls: B = Brightness = how light or dark the colour is, from black to full brightness.

Final Answer: Brightness controls overall lightness/darkness of the colour. $\Rightarrow$ D

Answer: (D) Go Back to Q21

Q22.

Solution

Quick Solution Concept: Complementary Colours (RYB). Chapter: Colour Theory & Composition. On the RYB wheel Yellow's complementary is the secondary directly opposite: Violet (Purple). Answer: (C).

Concept — Complementary of Yellow (RYB): In the RYB colour wheel, the three primaries are Red (at roughly 0°), Yellow (at roughly 120°), and Blue (at roughly 240°). The secondary colours are:

- Red + Yellow = Orange (opposite Blue)
- Yellow + Blue = Green (opposite Red)
- Red + Blue = Violet/Purple (opposite Yellow)

Step 1 — Find Yellow's complement: Yellow's complement is the secondary colour directly opposite it on the RYB wheel: Violet (Purple).

Final Answer: The complementary of Yellow on the RYB wheel is Violet (Purple). $\Rightarrow$ C

Answer: (C) Go Back to Q22

Q23.

Solution

Quick Solution Concept: Double-Complementary (Tetradic) Scheme. Chapter: Colour Theory & Composition. Tetradic = four colours as two complementary pairs forming a rectangle on the colour wheel. Answer: (A).

Concept — Double-Complementary (Tetradic) Scheme: A tetradic (double-complementary) colour scheme uses **four** colours arranged as *two pairs of complementary colours*. On the colour wheel, the four hues form a rectangle (or square). This scheme offers rich variety but requires careful balancing.

Step 1 — Match Option (A): Option (A) correctly describes the tetradic scheme: four colours as two sets of complementary pairs forming a rectangle on the wheel.

Why other options are wrong:

- Option B: Describes the triadic scheme (three colours, 120° apart).
- Option C: Describes the basic complementary scheme (two colours opposite each other).
- Option D: A five-colour scheme is not a standard named colour harmony.

Final Answer: Tetradic = four colours as two complementary pairs. $\Rightarrow$ A

Answer: (A) Go Back to Q23

Q24.

Solution

Quick Solution Concept: Colour Temperature of Light. Chapter: Colour Theory & Composition. 3000K = warm amber/golden light; 6500K = cool blue-white daylight. 3000K produces the cosy, intimate effect in Option B. Answer: (B).

Concept — Colour Temperature of Light: Colour temperature (measured in Kelvin) describes the "warmth" or "coolness" of white light:

- Low K (2700–3000K): warm, amber/golden light — candle, incandescent bulbs.
- Mid K (3500–4500K): neutral/cool white.
- High K (5500–6500K+): cool, blue-white daylight.

Step 1 — Identify 3000K: At 3000K the light is warm white with an amber/golden tone, making spaces feel cosy and intimate. Option (B) correctly describes this.

Why other options are wrong:

- Option A: A crisp, blue-white illumination is characteristic of high K (6500K), not 3000K.
- Option C: Green-tinted light is not typical of any standard colour temperature.
- Option D: Colour temperature absolutely affects the visual appearance of objects and surfaces.

Final Answer: 3000K produces warm amber/golden light that feels cosy and intimate. $\Rightarrow$ B

Answer: (B) Go Back to Q24

Q25.

Solution

Quick Solution Concept: Subtractive Colour Mixing (RYB). Chapter: Colour Theory & Composition. RYB secondaries: R+Y=Orange, Y+B=Green, R+B=Violet/Purple. Red mixed with Blue = Violet. Answer: (D).

Concept — Secondary Colours in RYB: In the RYB subtractive pigment model, mixing two primary colours produces a secondary colour:

- Red + Yellow = Orange
- Yellow + Blue = Green
- **Red + Blue = Violet / Purple**

Step 1 — Apply Red + Blue: Mixing red and blue produces violet/purple.

Why other options are wrong:

- Option A: Orange = Red + Yellow.
- Option B: Green = Yellow + Blue.

- Option C: Brown results from mixing all three primaries or complementary colours together.

Final Answer: Red + Blue (RYB pigment) = Violet (Purple). $\Rightarrow$ D

Answer: (D) Go Back to Q25

Q26.

Solution

Quick Solution Concept: Tints and Pastel Colours. Chapter: Colour Theory & Composition. Pastels are tints: adding white to a pure hue reduces saturation and increases lightness. Option A. Answer: (A).

Concept — Tints (Pastel Colours): A *tint* is created by adding white to a pure hue. Tints are lighter and less saturated than the original hue. Pastel colours are simply tints of bright primary or secondary hues (e.g., baby pink = red + white; mint green = green + white).

Step 1 — Match Option (A): Option (A) correctly explains that pastel colours are created by adding white to a pure hue, reducing saturation and increasing lightness — producing tints.

Why other options are wrong:

- Option B: Adding black creates shades, not pastels.
- Option C: Mixing complementary colours creates neutral/grey-browns, not pastels.
- Option D: Grey as a base creates tones, not tints; and is not how pastels are made.

Final Answer: Pastel colours are tints: pure hue + white. $\Rightarrow$ A

Answer: (A) Go Back to Q26

Q27.

Solution

Quick Solution Concept: Achromatic Colours. Chapter: Colour Theory & Composition. Achromatic = no hue component; pure black, white, or any shade of grey. Matches Option C. Answer: (C).

Concept — Achromatic Colours: Achromatic colours are those that contain *no hue component* — they are pure black, pure white, or any shade of grey. "Achromatic" literally means "without colour" (from Greek: a- = without, $chroma$ = colour).

Step 1 — Match Option (C): Option (C) correctly defines achromatic colours: no hue — pure black, white, or grey.

Why other options are wrong:

- Option A: High saturation describes chromatic colours, the opposite of achromatic.
- Option B: Warm-end colours are chromatic (red, orange, yellow) with hue.
- Option D: Mixing complementary colours produces neutral browns or greys that may have residual hue; achromatic colours have zero hue.

Final Answer: Achromatic colours contain no hue — they are black, white, or grey. $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q27

Q28.

Solution

Quick Solution Concept: Analogous Colour Scheme. Chapter: Colour Theory & Composition. Three adjacent hues on the colour wheel (H1, H2, H3 in the diagram) form an analogous scheme. Answer: (B).

Concept — Analogous Colour Scheme: An analogous colour scheme uses three (or more) colours that are *adjacent* to each other on the colour wheel (neighbouring hues). The result is harmonious and pleasing because the colours share a common hue undertone.

Step 1 — Interpret the diagram: The colour wheel segment shows three consecutive (adjacent) segments highlighted — hues H1, H2, H3 — sitting next to each other on the wheel. This is the definition of an analogous scheme.

Why other options are wrong:

- Option A: A complementary scheme uses two *opposite* hues on the wheel.
- Option C: A triadic scheme uses three hues spaced *120° apart*, not adjacent.
- Option D: A split-complementary scheme uses one base colour plus two colours adjacent to its complement.

Final Answer: Three adjacent hues on the wheel = analogous colour scheme. $\Rightarrow$ B

Answer: (B) Go Back to Q28

Q29.

Solution

Quick Solution Concept: Verbal Analogy. Chapter: Lateral Thinking. Film : Director (primary creator) $\Rightarrow$ Novel : Author (primary creator). Direct functional parallel. Answer: (D).

Concept — Analogy (Creative/Verbal Reasoning): The analogy "Film : Director" expresses the relationship: a director is the primary creative person who creates a film. Applying the same relationship to "Novel : ___", the primary creative person who creates a novel is the *author* (writer).

Step 1 — Apply the relationship: Film $\rightarrow$ Director (creates). Novel $\rightarrow$ Author (creates). Answer: Author (Writer).

Why other options are wrong:

- Option A: An actor performs in a film but does not *create* it in the same way.
- Option B: An illustrator creates images for a book but is not the primary creative force.
- Option C: A publisher distributes a novel but does not create it.

Final Answer: Novel : Author. $\Rightarrow$ D

Answer: (D) Go Back to Q29

Q30.

Solution

Quick Solution Concept: Odd One Out (Digital vs Traditional Media). Chapter: Lateral Thinking. Watercolour, oil pastel, and charcoal are physical media; Adobe After Effects is the only digital software tool. Answer: (C).

Concept — Digital vs Traditional Creative Media: This question asks for the one *digital* tool among traditional (physical) media.

Step 1 — Classify each:

- Watercolour: traditional paint medium.
- Oil pastel: traditional drawing/painting stick.
- **Adobe After Effects:** digital motion graphics and visual effects software — the only digital tool.
- Charcoal: traditional drawing medium.

Final Answer: Adobe After Effects is the digital design tool. $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q30

Q31.

Solution

Quick Solution Concept: Classic Riddle. Chapter: Lateral Thinking. Speaks without a mouth, hears without ears, no body — an echo reflects sound, creating the illusion of a voice with no source. Answer: (A).

Concept — Classic Riddle (Echo): The riddle describes something that: (i) appears to speak (has a "voice") but has no mouth; (ii) appears to hear but has no ears; (iii) has no physical body; (iv) exists/responds to wind (sound travels through air). An *echo* fits all four clues — it is the reflection of sound waves off a surface, giving the impression of a "voice" with no body.

Final Answer: The answer is an echo. $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q31

Q32.

Solution

Quick Solution Concept: SCAMPER Ideation Method. Chapter: Lateral Thinking. SCAMPER: Substitute, Combine, Adapt, Modify, Put to other uses, Eliminate, Rearrange. "S" = Substitute. Answer: (B).

Concept — SCAMPER Method: SCAMPER is a creative ideation checklist developed by Bob Eberle. Each letter stands for:

- **S** — Substitute
- **C** — Combine
- **A** — Adapt
- **M** — Modify/Magnify/Minimise
- **P** — Put to other uses
- **E** — Eliminate
- **R** — Reverse/Rearrange

Step 1 — Identify "S": The "S" in SCAMPER stands for **Substitute** — replacing a component, material, or process with something else to spark a new design idea.

Final Answer: S = Substitute. $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q32

Q33.

Solution

Quick Solution Concept: Part-Function Analogy. Chapter: Lateral Thinking. Lead is the mark-making core of a pencil; bristle is the mark-making part of a paintbrush. Direct functional parallel. Answer: (D).

Concept — Analogy (Part-Whole/Tool): The analogy "Pencil : Lead" expresses the relationship: the *lead* (graphite core) is the functional, mark-making part inside a pencil. Applying the same relationship to "Brush : ___", the mark-making part of a paintbrush is its *bristles* (or hair).

Step 1 — Apply: Pencil $\rightarrow$ Lead (functional core). Brush $\rightarrow$ Bristle (functional mark-making part).

Why other options are wrong:

- Option A: The handle is the grip portion, not the mark-making element.
- Option B: The ferrule is the metal band connecting the bristles to the handle — a structural part, not the mark-making element.

- Option C: A canvas is the surface the brush is used on, not part of the brush.

Final Answer: Brush : Bristle. $\Rightarrow$ D

Answer: (D) Go Back to Q33

Q34.

Solution

Quick Solution Concept: Letter-Value Code (A=1...Z=26). Chapter: Lateral Thinking. G=7, R=18, E=5, E=5, N=14. Sum $= 7 + 18 + 5 + 5 + 14 = 49$. Answer: (C).

Concept — Letter-Value Code: Using the standard A=1, B=2 ... Z=26 code:

Step 1 — Compute for GREEN:

$$\text{G} = 7, \quad \text{R} = 18, \quad \text{E} = 5, \quad \text{E} = 5, \quad \text{N} = 14$$

$$\text{Sum} = 7 + 18 + 5 + 5 + 14 = \mathbf{49}$$

Why other options are wrong:

- Option A: 44 would imply a total missing 5 (likely omitting one 'E').
- Option B: 47 is incorrect arithmetic.
- Option D: 52 overcounts by 3.

Final Answer: $7 + 18 + 5 + 5 + 14 = 49$. $\Rightarrow$ C

Answer: (C) Go Back to Q34

Q35.

Solution

Quick Solution Concept: Inclusive Design Problem-Solving. Chapter: Lateral Thinking. Wrist-strap mount + single-button auto-open/close solves one-handed deployment and control simultaneously. Answer: (A).

Concept — Inclusive/Universal Design: Designing for one-handed use requires solving two problems simultaneously: (i) deploying/closing the umbrella without two-hand grip, and (ii) keeping it stable during use.

Step 1 — Evaluate Option (A): A wrist-strap mount (secures the umbrella to the wrist without gripping) combined with a single-button auto-open/close mech-

anism (deploys and closes with one button press) directly solves both problems. This is the most complete and clever solution.

Why other options are wrong:

- Option B: A heavier handle for two-hand grip worsens the problem rather than solving it.
- Option C: A two-handed fold mechanism directly contradicts the one-handed requirement.
- Option D: A dome with no handle provides no meaningful mechanism improvement for one-handed use.

Final Answer: Wrist-strap + single-button auto-open/close is the best one-handed redesign. $\Rightarrow$ A

Answer: (A) Go Back to Q35

Q36.

Solution

Quick Solution Concept: HfG Ulm (Ulm School of Design). Chapter: Design History. HfG Ulm merged systematic scientific methodology with design; its Braun collaboration shaped 20th-century product design. Answer: (B).

Concept — HfG Ulm (Ulm School): Founded in 1953 by Inge Aicher-Scholl, Otl Aicher, and Max Bill, the Hochschule für Gestaltung Ulm (often called simply "the Ulm School") is historically significant for merging *systems thinking, scientific methodology, and semiotics* with design practice. Its collaboration with the German company Braun (particularly with designers like Dieter Rams and Hans Gugelot) produced some of the most influential product designs of the 20th century and laid the groundwork for modern design methodology.

Final Answer: HfG Ulm merged systematic science with design and influenced modern product design via its Braun collaboration. $\Rightarrow$ B

Answer: (B) Go Back to Q36

Q37.

Solution

Quick Solution Concept: Alvar Aalto. Chapter: Design History. Alvar Aalto (1898–1976) was a Finnish architect and designer renowned for humanistic modernism and bent birch plywood furniture. Answer: (D).

Concept — Alvar Aalto: Alvar Aalto (1898–1976) was a Finnish architect and designer, celebrated for his humanistic modernism. He pioneered the use of organically shaped bent birch plywood in furniture (e.g., the Paimio Chair, the Stool 60), and his architecture blended modernist principles with natural materials and sensitivity to the Nordic landscape. He is considered one of the most important figures in 20th-century architecture and design, and represents the **Finnish** design tradition.

Final Answer: Alvar Aalto was from Finland. $\Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q37

Q38.

Solution

Quick Solution Concept: Saul Bass. Chapter: Design History. Saul Bass pioneered film title-sequence design and created iconic corporate logos for AT&T, United Airlines, and Minolta. Answer: (A).

Concept — Saul Bass: Saul Bass (1920–1996) was an American graphic designer and filmmaker best known for two bodies of work:

- **Film title sequences:** he transformed the title sequence from a list of credits into an autonomous short film that set the tone of the movie (e.g., titles for *Vertigo*, *Psycho*, *Anatomy of a Murder*, *Schindler's List*).
- **Corporate logo design:** he created lasting identities for major corporations including AT&T (the striped globe), United Airlines (the tulip), Minolta, Quaker Oats, and Continental Airlines.

Final Answer: Saul Bass pioneered film title sequences and designed iconic corporate logos. $\Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q38

Q39.

Solution

Quick Solution Concept: Jugendstil = Art Nouveau. Chapter: Design History. Jugendstil ("youth style") is the German and Scandinavian name for the international Art Nouveau movement. Answer: (C).

Concept — Jugendstil = Art Nouveau: "Jugendstil" (literally "youth style" in German, named after the Munich magazine *Jugend*) is the German and Scandinavian name for the international movement known in French and English as **Art Nouveau** ("new art"). It was characterised by organic, flowing curves, natural motifs (flowers, insects, women with flowing hair), and a rejection of historical revivalism.

Final Answer: Jugendstil is the German name for Art Nouveau. $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q39

Q40.

Solution

Quick Solution Concept: Dieter Rams and Braun. Chapter: Design History. Dieter Rams served as head of design at Braun (1961–1995) and developed the "Ten Principles of Good Design" there. Answer: (B).

Concept — Dieter Rams and Braun: Dieter Rams (born 1932) served as Chief Design Officer (head of design) at the German consumer electronics and appliances company **Braun** from 1961 to 1995. During this period he developed his famous "Ten Principles of Good Design" (also known as "Good Design is…") and created iconic products (the SK4 radio, T3 pocket radio, ET66 calculator) that profoundly influenced modern product design, including Apple's product design philosophy.

Final Answer: Dieter Rams headed design at **Braun**. $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q40

Q41.

Solution

Quick Solution Concept: Victor Papanek — Social Design Responsibility. Chapter: Design History. Papanek argued in *Design for the Real World* (1971) that designers have a moral duty to design for all people and for ecological impact. Answer: (D).

Concept — Victor Papanek and Social Design: Victor Papanek (1923–1998) was an Austrian-American designer and educator whose book *Design for the Real World: Human Ecology and Social Change* (1971) became one of the most widely read design books ever published. He argued powerfully that designers have a moral and social responsibility to design for the needs of all people — the poor, the disabled, people in developing countries — and that design must consider its ecological and social impact, not merely aesthetics and profit.

Final Answer: Papanek argued designers have moral/social responsibility to design for all people and for ecological impact. $\Rightarrow \boxed{D}$

Answer: (D) Go Back to Q41

Q42.

Solution

Quick Solution Concept: Otl Aicher — 1972 Munich Olympics. Chapter: Design History. Otl Aicher designed the comprehensive visual identity and pictogram system for the 1972 Munich Summer Olympics. Answer: (A).

Concept — Otl Aicher: 1972 Munich Olympics: Otl Aicher (1922–1991), co-founder of the HfG Ulm and one of the most influential graphic designers of the 20th century, created the comprehensive visual identity system for the **1972 Munich Summer Olympics**. His work included the iconic colour-coded identity (bright rainbow hues against grey and white), the grid-based pictogram system for sports (which became the template for all subsequent Olympic and public-information pictograms worldwide), signage, and environmental graphics.

Final Answer: Otl Aicher designed the visual identity and pictogram system for the 1972 Munich Olympics. $\Rightarrow \boxed{A}$

Answer: (A) Go Back to Q42

Q43.

Solution

Quick Solution Concept: Counter in Type Anatomy. Chapter: Typography & Branding. The counter is the enclosed or partially enclosed negative space inside a letterform (the "hole" in 'O', 'P', 'B'). Answer: (C).

Concept — Counter in Type Anatomy: In typographic anatomy, the *counter* is the enclosed or partially enclosed negative (white) space within a letterform. Fully enclosed counters appear in letters like 'O', 'D', 'B', '0' (zero). Partially enclosed counters appear in letters like 'C', 'G', 'U'. The counter is the "hole" or "bowl" inside the letter.

Step 1 — Match Option (C): Option (C) correctly defines the counter as "the enclosed or partially enclosed circular or curved negative space inside a letterform."

Why other options are wrong:

- Option A: The stem is the main vertical stroke.
- Option B: The crossbar is the horizontal stroke across letters like 'H', 'A', 'e'.
- Option D: The descender is the part of a letter that extends below the baseline (as in 'p', 'g', 'y').

Final Answer: The enclosed negative space inside a letterform is the counter. $\Rightarrow$ $\boxed{C}$

Answer: (C) Go Back to Q43

Q44.

Solution

Quick Solution Concept: Orphan vs Widow. Chapter: Typography & Branding. Orphan = first line of a paragraph alone at the bottom of a column/page; Widow = last line alone at the top. Answer: (B).

Concept — Orphan vs Widow in Typography: These terms are often confused:

- **Widow:** the *last* line of a paragraph that appears *alone at the top* of a new column or page — "left behind" (widowed) from the body of the paragraph.
- **Orphan:** the *first* line of a paragraph that is left *alone at the bottom* of a column or page — "orphaned" (separated) from the rest of the paragraph below it.

Step 1 — Match Option (B): Option (B) correctly defines an orphan: "the first

line of a paragraph that appears alone at the BOTTOM of a column or page."

Final Answer: An orphan is the first line of a paragraph alone at the bottom of a column/page. ⇒ B

Answer: (B) Go Back to Q44

Q45.

Solution

Quick Solution Concept: Type Weight Spectrum. Chapter: Typography & Branding. Thinnest to heaviest: Thin → Light → Regular → Medium → SemiBold → Bold → ExtraBold → Black. Answer: (A).

Concept — Type Weight Spectrum: Typefaces with multiple weights progress from lightest (thinnest strokes) to heaviest (thickest strokes). The standard order from thinnest to heaviest is:

Thin → Extra Light (Ultra Light) → Light → Regular → Medium → SemiBold → Bold → Extra Bold → Black (Heavy)

Step 1 — Match Option (A): Option (A) lists: Thin → Light → Regular → Medium → SemiBold → Bold → ExtraBold → Black. This is correct and in standard order.

Why other options are wrong: Options B, C, and D place heavier weights before lighter ones or shuffle the order incorrectly.

Final Answer: Thin → Light → Regular → Medium → SemiBold → Bold → ExtraBold → Black. ⇒ A

Answer: (A) Go Back to Q45

Q46.

Solution

Quick Solution Concept: Type Specimen. Chapter: Typography & Branding. A type specimen showcases a typeface in all its weights, styles, and sizes — used by designers to evaluate and select fonts. Answer: (D).

Concept — Type Specimen: A *type specimen* is a printed or digital document produced by a type foundry or designer to showcase a typeface. It demonstrates the face in all its weights, styles (regular, italic, bold, condensed, etc.), and sizes — typically including text samples, character sets, and usage examples. Designers use type specimens to evaluate and select typefaces for their projects.

Step 1 — Match Option (D): Option (D) correctly defines a type specimen as "a printed or digital document that showcases a typeface in all its weights, styles, and sizes."

Why other options are wrong:

- Option A: Describes a *point* (typographic unit = 1/72 inch).
- Option B: Describes a *type block* in letterpress printing.
- Option C: Describes a typeface's *style variants* or *family members*.

Final Answer: A type specimen showcases a typeface in all weights, styles, and sizes. $\Rightarrow$ D

Answer: (D) Go Back to Q46

Q47.

Solution

Quick Solution Concept: Combination Mark. Chapter: Typography & Branding. A combination mark pairs a graphic symbol (icon) with a wordmark (the brand name in a specific typeface). Answer: (B).

Concept — Logo Types: The main logo/mark types are:

- **Wordmark (Logotype):** brand name in a stylised typeface only (e.g., Google, Coca-Cola).
- **Lettermark (Monogram):** initials in a stylised typographic form (e.g., IBM, NASA).
- **Pictorial mark:** a recognisable icon/symbol (e.g., Apple's apple, Twitter's bird).
- **Abstract mark:** a non-representational geometric shape (e.g., Nike Swoosh, Adidas stripes).
- **Combination mark:** a graphic symbol + wordmark together (e.g., Adidas badge + text, Burger King).

Step 1 — Match Option (B): A combination mark = graphic symbol (icon) + wordmark together.

Final Answer: A combination mark combines a graphic symbol and a wordmark. $\Rightarrow$ B

Answer: (B) Go Back to Q47

Q48.

Solution

Quick Solution Concept: Abstract Mark vs Pictorial Mark. Chapter: Typography & Branding. The Nike Swoosh is a curved abstract shape that does not depict a recognisable object — an abstract mark. Answer: (C).

Concept — Abstract Mark vs Pictorial Mark:

- **Pictorial mark:** depicts a recognisable real object (apple, bird, mermaid).
- **Abstract mark:** uses a geometric or abstract shape that does *not* represent a recognisable object.

Step 1 — Classify each option:

- Apple logo: pictorial (recognisable fruit with a bite).
- Twitter bird: pictorial (a bird).
- **Nike Swoosh:** a curved line that does not depict a real object — it is an abstract mark.
- Starbucks siren: pictorial (an illustrative mermaid figure).

Final Answer: The Nike Swoosh is an abstract mark. $\Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q48

Q49.

Solution

Quick Solution Concept: Brand Style Guide. Chapter: Typography & Branding. A brand style guide defines logo rules, colour palette, typography system, imagery guidelines, and tone of voice. Answer: (D).

Concept — Brand Style Guide: A *brand style guide* (or brand standards manual) is a comprehensive document that governs consistent application of a brand's visual and verbal identity. A complete guide defines:

- **Logo usage rules:** clear space, minimum sizes, approved and prohibited uses.
- **Colour palette:** primary and secondary brand colours with Pantone/CMYK/RGB/HEX values.
- **Typography system:** primary and secondary typefaces, weights, sizes, and hierarchy.
- **Imagery guidelines:** photography style, illustration style, icons.

- **Tone of voice:** language style, personality, key messages.

Step 1 — Match Option (D): Option (D) correctly lists all major components.

Final Answer: A brand style guide covers logos, colour palette, typography, imagery, and tone of voice. $\Rightarrow$ $\boxed{D}$

Answer: (D) Go Back to Q49

Q50.

Solution

Quick Solution Concept: Optical Size Adjustments. Chapter: Typography & Branding. Small-size opticals use thicker strokes, open apertures, wider tracking, and larger counters to preserve legibility at small sizes. Answer: (A).

Concept — Optical Size Adjustments: When a typeface is designed with *optical size variants* ("opticals"), the small-text version is NOT simply a mathematical scale-down of the display version. At very small sizes (6–8pt), certain features are exaggerated to preserve legibility:

- **Thicker strokes:** prevent thin strokes from disappearing.
- **More open apertures** (wider openings in 'c', 'e', 's'): prevent optical closure.
- **Increased letter-spacing (tracking):** prevent letters from touching or merging.
- **Larger counters** (the holes inside 'o', 'p'): keep enclosed spaces open.

Step 1 — Match Option (A): Option (A) correctly describes all four adjustments for a small-size optical variant.

Why other options are wrong:

- Option B: Thinner strokes and closed apertures would reduce legibility at small sizes.
- Option C: Digital fonts do NOT scale perfectly — optical size adjustments are specifically needed because pure scaling fails.
- Option D: Condensed narrow letters at small sizes would reduce legibility further.

Final Answer: Small-size optical variants use thicker strokes, open apertures, wider tracking, larger counters. $\Rightarrow$ $\boxed{A}$

Answer: (A) Go Back to Q50

Answer Key

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