

UCEED Sample Paper

Duration: 180 Minutes

Maximum Marks: 300

Instructions

- This is a full-length UCEED practice paper. **Part A** (Q1–Q57, 200 marks, computer-based) has three sections: **Section 1** NAT, Numerical Answer Type (Q1–Q14); **Section 2** MSQ, Multiple Select Questions (Q15–Q29); **Section 3** MCQ, Multiple Choice Questions (Q30–Q57). **Part B** (Q58–Q59, 100 marks, pen and paper) tests drawing and design aptitude.
- **Marking - Part A:** NAT: +4, no negative marking. MSQ: +4 if all correct options and no wrong option are chosen; +1 for each correct option chosen when no wrong option is chosen; –1 if any wrong option is chosen. MCQ: +3 for correct, –0.71 for wrong.
- **Marking - Part B:** each of the two questions carries **50 marks**, evaluated on your drawing and design response. There is no negative marking in Part B.
- Tap **View Solution** (Part A) or **View Model Approach** (Part B) under any question to jump to its worked explanation. Calculators and electronic gadgets are not allowed.

Section 1: Numerical Answer Type (NAT)

Q1. In typography, 72 points equal 1 inch. Lines of type set at 36 points each are stacked one below another with no extra space between them. How many such lines fit exactly within a column height of 4 inches?

(Numerical Answer Type - enter a numerical value; no options.)

[View Solution](#)



Q2. A solid cube of side 5 units is painted on all six faces and then cut into unit cubes of side 1. How many of the small unit cubes have no painted face at all?

(Numerical Answer Type - enter a numerical value; no options.)

[View Solution](#)

Q3. An architectural site map is drawn to a scale of 1 : 25000 (that is, 1 cm on the map represents 25000 cm on the ground). Two landmarks are 6 cm apart on the map. What is the actual distance between them, in kilometres?

(Numerical Answer Type - enter a numerical value; no options.)

[View Solution](#)

Q4. In 2018, a person spent half the time working, a third in sleeping and one-eighth in cooking. He spent the rest of the time exercising. How many total hours did he spend exercising?

(Numerical Answer Type - enter a numerical value; no options.)

[View Solution](#)

Q5. A designer mixes pink paint by combining red and white in the ratio 2 : 3. To prepare 5 litres of this pink paint, how many litres of red paint are needed?

(Numerical Answer Type - enter a numerical value; no options.)

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Q6. A digital image is 1920 pixels wide. It is printed at a resolution of 300 pixels per inch (ppi). What is the printed width of the image in inches?

(Numerical Answer Type - enter a numerical value; no options.)



[View Solution](#)

Q7. On a standard analog clock face, what is the angle in degrees between the hour hand and the minute hand at exactly 4:00?

(Numerical Answer Type - enter a numerical value; no options.)

[View Solution](#)

Q8. A straight wire of length 88 cm is bent to form a circle with no overlap. What is the radius of the circle in centimetres? (Use $\pi = \frac{22}{7}$)

(Numerical Answer Type - enter a numerical value; no options.)

[View Solution](#)

Q9. A printed poster is priced at 250 rupees. A shop first gives a 20% discount and then adds 5% tax on the discounted price. What is the final amount paid, in rupees?

(Numerical Answer Type - enter a numerical value; no options.)

[View Solution](#)

Q10. A cube of side 4 units is painted on all six faces and cut into unit cubes. How many of the resulting unit cubes have at least one painted face?

(Numerical Answer Type - enter a numerical value; no options.)

[View Solution](#)

Q11. Study the number series and find the next term: 2, 6, 12, 20, 30, ...

(Numerical Answer Type - enter a numerical value; no options.)

[View Solution](#)



Q12. Three designers working together finish a brochure in 8 days. If 4 designers of the same working speed are put on an identical brochure, how many days will they take to finish it?

(Numerical Answer Type - enter a numerical value; no options.)

[View Solution](#)

Q13. A logo occupies 25% of the area of a rectangular poster that measures 20 cm $\times$ 16 cm. What is the area of the logo in square centimetres?

(Numerical Answer Type - enter a numerical value; no options.)

[View Solution](#)

Q14. A regular pentagon is rotated about its centre so that it maps exactly onto itself. What is the smallest angle of rotation, in degrees, for which this happens?

(Numerical Answer Type - enter a numerical value; no options.)

[View Solution](#)

Section 2: Multiple Select Questions (MSQ)

Q15. Which of the following terms relate(s) to printmaking?

(One or more options may be correct.)

- (A) Serigraphy
- (B) Lithography
- (C) Cartography
- (D) Etching

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Q16. Which of the following are traditional Indian folk or tribal painting styles?

(One or more options may be correct.)

- (A) Cubism
- (B) Madhubani
- (C) Warli
- (D) Gond

[View Solution](#)

Q17. Which of the following are vector graphic file formats (as opposed to raster formats)?

(One or more options may be correct.)

- (A) JPEG
- (B) PNG
- (C) SVG
- (D) EPS

[View Solution](#)

Q18. Which of the following typefaces is classified as a serif typeface?

(One or more options may be correct.)

- (A) Helvetica
- (B) Times New Roman
- (C) Futura
- (D) Arial

[View Solution](#)



Q19. Which of the following are Indian classical dance forms recognised by the Sangeet Natak Akademi?

(One or more options may be correct.)

- (A) Odissi
- (B) Manipuri
- (C) Mohiniyattam
- (D) Sattriya

[View Solution](#)

Q20. Which of the following figures are associated with the De Stijl movement?

(One or more options may be correct.)

- (A) Antoni Gaudi
- (B) Piet Mondrian
- (C) Le Corbusier
- (D) Gerrit Rietveld

[View Solution](#)

Q21. Which of the following are principles of design (rather than elements of design)?

(One or more options may be correct.)

- (A) Balance
- (B) Line
- (C) Contrast
- (D) Emphasis



[View Solution](#)

Q22. Which of the following are traditional Indian textile crafts?

(One or more options may be correct.)

- (A) Origami
- (B) Ikebana
- (C) Bandhani
- (D) Kalamkari

[View Solution](#)

Q23. Which of the following is measured in dots per inch (dpi)?

(One or more options may be correct.)

- (A) Font weight
- (B) Colour temperature
- (C) Print resolution
- (D) Screen refresh rate

[View Solution](#)

Q24. Which of the following are UNESCO World Heritage Sites located in India?

(One or more options may be correct.)

- (A) Taj Mahal
- (B) Group of Monuments at Hampi
- (C) Khajuraho Group of Monuments
- (D) Konark Sun Temple



[View Solution](#)

Q25. Which of the following are Gestalt principles of visual perception?

(One or more options may be correct.)

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

[View Solution](#)

Q26. Which of the following are well-known Indian architects?

(One or more options may be correct.)

- (A) B. V. Doshi
- (B) Zaha Hadid
- (C) Frank Gehry
- (D) Charles Correa

[View Solution](#)

Q27. Which of the following are typography terms describing the spacing of type?

(One or more options may be correct.)

- (A) Kerning
- (B) Leading
- (C) Tracking
- (D) Dithering



[View Solution](#)

Q28. Which of the following art movements is Salvador Dali most closely associated with?

(One or more options may be correct.)

- (A) Impressionism
- (B) Cubism
- (C) Bauhaus
- (D) Surrealism

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Q29. Which of the following are concepts drawn from Japanese art and design?

(One or more options may be correct.)

- (A) Feng Shui
- (B) Wabi-sabi
- (C) Ma
- (D) Rangoli

[View Solution](#)

Section 3: Multiple Choice Questions (MCQ)

Q30. Study the series and find the next term: 5, 10, 20, 40, ...

- (A) 80
- (B) 70
- (C) 100



(D) 60

[View Solution](#)

Q31. Who painted the famous portrait known as the Mona Lisa?

- (A) Michelangelo
- (B) Leonardo da Vinci
- (C) Raphael
- (D) Sandro Botticelli

[View Solution](#)

Q32. Fine Pashmina shawls are traditionally associated with which Indian region?

- (A) Kutch
- (B) Kanchipuram
- (C) Kashmir
- (D) Varanasi

[View Solution](#)

Q33. In typography, the adjustment of space between two particular adjacent letters is called:

- (A) Leading
- (B) Tracking
- (C) Baseline
- (D) Kerning

[View Solution](#)



Q34. On the traditional artist's (RYB) colour wheel, which colour is the complement of blue?

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

[View Solution](#)

Q35. In a code, the word CAT is written as 3-1-20 using the position of each letter in the alphabet. How would DOG be written in the same code?

- (A) 4-14-7
- (B) 4-15-7
- (C) 3-15-7
- (D) 4-15-8

[View Solution](#)

Q36. The Lotus Temple in New Delhi is a house of worship associated with which faith?

- (A) Hinduism
- (B) Sikhism
- (C) the Bahai Faith
- (D) Jainism

[View Solution](#)

Q37. How many edges does a cube have?

- (A) 6



- (B) 8
- (C) 10
- (D) 12

[View Solution](#)

Q38. Art Nouveau, popular around 1890 to 1910, is best recognised for which visual quality?

- (A) Flowing organic lines inspired by plants and nature
- (B) Rigid modular grids and repeated squares
- (C) Fragmented geometric planes seen from many viewpoints
- (D) Bold flat blocks of primary colour with black outlines

[View Solution](#)

Q39. Which of the following is a vector graphic file format?

- (A) JPEG
- (B) SVG
- (C) PNG
- (D) GIF

[View Solution](#)

Q40. The Ashoka Chakra shown at the centre of the Indian national flag has how many spokes?

- (A) 12
- (B) 18
- (C) 24
- (D) 32



[View Solution](#)

- Q41.** Pointing to a photograph, a man says, "She is the daughter of my grandfather's only son." How is the girl in the photograph related to the man?
- (A) Mother
 - (B) Aunt
 - (C) Cousin
 - (D) Sister

[View Solution](#)

- Q42.** The Bauhaus, an influential school of art, craft and design, was founded in 1919 by whom?
- (A) Walter Gropius
 - (B) Le Corbusier
 - (C) Mies van der Rohe
 - (D) Frank Lloyd Wright

[View Solution](#)

- Q43.** The golden ratio, often used in art and design for pleasing proportions, is approximately equal to:
- (A) 1.414
 - (B) 1.618
 - (C) 2.718
 - (D) 3.142

[View Solution](#)



Q44. Warli painting, known for simple white figures made of triangles and circles on an earthy background, originates from which Indian state?

- (A) Rajasthan
- (B) Bihar
- (C) Maharashtra
- (D) Odisha

[View Solution](#)

Q45. Which colour model is standard for full-colour printing?

- (A) RGB
- (B) HSL
- (C) HSB
- (D) CMYK

[View Solution](#)

Q46. Which one of the following does not belong with the others?

- (A) Triangle
- (B) Square
- (C) Rectangle
- (D) Rhombus

[View Solution](#)

Q47. The Sydney Opera House, famous for its sail-like shells, was designed by which architect?

- (A) Frank Gehry



- (B) Jorn Utzon
- (C) Zaha Hadid
- (D) I. M. Pei

[View Solution](#)

Q48. What is the measure of each interior angle of a regular hexagon?

- (A) 90 degrees
- (B) 108 degrees
- (C) 120 degrees
- (D) 135 degrees

[View Solution](#)

Q49. Which Indian city is especially famous for its traditional blue pottery?

- (A) Khurja
- (B) Moradabad
- (C) Bhuj
- (D) Jaipur

[View Solution](#)

Q50. The illusion that a rapid sequence of still images appears to move smoothly is explained mainly by which principle?

- (A) Persistence of vision
- (B) Colour subtraction
- (C) Linear perspective
- (D) Surface tension



[View Solution](#)

Q51. The typeface Helvetica is classified under which category?

- (A) Serif
- (B) Sans-serif
- (C) Script
- (D) Blackletter

[View Solution](#)

Q52. Rangoli, a traditional Indian decorative art, is most commonly created using which of the following?

- (A) Carved wood panels
- (B) Cast metal plates
- (C) Coloured powders and flowers on the floor
- (D) Woven silk threads

[View Solution](#)

Q53. In a certain code, each letter of a word is shifted one place forward in the alphabet, so MODEL becomes NPEFM. Using the same rule, what is the code for CHAIR?

- (A) BGZHQ
- (B) DIBKS
- (C) DJBJS
- (D) DIBJS

[View Solution](#)



Q54. In the additive colour model used by screens, the three primary colours are:

- (A) Red, Green, Blue
- (B) Red, Yellow, Blue
- (C) Cyan, Magenta, Yellow
- (D) Red, Green, Yellow

[View Solution](#)

Q55. Ebru is a traditional art form that involves:

- (A) Carving sand into sculptures
- (B) Marbling patterns on paper from floating paint
- (C) Blowing molten glass into shapes
- (D) Carving figures out of ice

[View Solution](#)

Q56. How many faces does a triangular prism have?

- (A) 3
- (B) 4
- (C) 5
- (D) 6

[View Solution](#)

Q57. The rule of thirds is a common guideline used in which of the following?

- (A) Metal welding



- (B) Kerning of type
- (C) Cooking measurements
- (D) Photography and visual composition

[View Solution](#)

Part B: Drawing and Design
Aptitude (Pen and Paper)

Q58. [Drawing - 50 Marks]

It is mid-morning in a crowded weekly vegetable market. Handcarts loaded with tomatoes, brinjals, gourds and greens line a narrow lane, jute sacks spill open on the ground, and shoppers with cloth bags move between the stalls. The focal subject is a woman vegetable vendor seated behind her cart, weighing a heap of tomatoes on a two-pan hand balance that she holds up at arm's length while a customer points at the pans. Imagine this scene and draw it with the vendor and her raised balance as the clear centre of interest. Show the loaded cart, the piles of produce, the ground sacks, at least two other shoppers, and the neighbouring stalls receding down the lane.

Note: Make pencil sketches only. Do not use colour.

Evaluation criteria: observation; composition; perspective and proportion; quality of lines; attention to detail.

[View Model Approach](#)

Q59. [Design Aptitude - 50 Marks]

Small children spill water constantly from open glasses and struggle with adult bottle caps, while parents cannot tell how much their child has actually drunk during the day. Design a drinking cup or bottle for



a three to five year old that resists spills when knocked over, is easy for small hands to open and close without help, and lets a parent see at a glance how much water is left. Show your design in two states: (1) closed and spill-safe, for example when it is dropped or tipped in a school bag, and (2) open and ready for the child to drink.

Note: Make pencil sketches only. Do not use colour. Explain your design only through visuals and short labels; do not write separate explanations.

[View Model Approach](#)



Detailed Solutions

Q1.

Q. In typography, 72 points equal 1 inch. Lines of type set at 36 points each are stacked one below another with no extra space between them. How many such lines fit exactly within a column height of 4 inches?

Solution

Concept - Point to inch conversion: Type height is measured in points, where 72 points make 1 inch. Convert the column height to points first, then divide by the line height.

Step 1 - Column height in points: $4 \text{ inches} \times 72 = 288 \text{ points}$.

Step 2 - Number of lines: Each line is 36 points, so lines $= \frac{288}{36} = 8$.

Tip: Always convert everything to a single unit (points) before dividing, or the count will be off.

Answer: 8 [Go Back to Q1](#)

Q2.

Q. A solid cube of side 5 units is painted on all six faces and then cut into unit cubes of side 1. How many of the small unit cubes have no painted face at all?

Solution

Concept - Painted-cube inner core rule: The unit cubes with no



painted face form a smaller solid block hidden inside, one layer away from every outer face.

Step 1 - Size of the hidden core: Remove one layer from each side: the core has side $n - 2 = 5 - 2 = 3$.

Step 2 - Count the core cubes: Unpainted cubes = $(n - 2)^3 = 3^3 = 27$.

Tip: No painted face $\Rightarrow (n - 2)^3$; this is just the inner cube you cannot see from outside.

Answer: 27 [Go Back to Q2](#)

Q3.

Q. An architectural site map is drawn to a scale of 1 : 25000 (that is, 1 cm on the map represents 25000 cm on the ground). Two landmarks are 6 cm apart on the map. What is the actual distance between them, in kilometres?

Solution

Concept - Map scale: Real distance = map distance $\times$ scale factor, keeping units consistent, then convert to kilometres.

Step 1 - Real distance in centimetres: $6 \times 25000 = 150000$ cm.

Step 2 - Convert to kilometres: 150000 cm = 1500 m = 1.5 km.

Tip: 1 km = 100000 cm; dividing map centimetres by this after scaling gives kilometres directly.

Answer: 1.5 [Go Back to Q3](#)

Q4.



Q. In 2018, a person spent half the time working, a third in sleeping and one-eighth in cooking. He spent the rest of the time exercising. How many total hours did he spend exercising?

Solution

Concept - Fractions of a whole: The fractions of time used up add to a single number; whatever is left over is the exercising fraction, applied to the total hours in the year.

Step 1 - Fraction used: $\frac{1}{2} + \frac{1}{3} + \frac{1}{8} = \frac{12 + 8 + 3}{24} = \frac{23}{24}$. Remaining fraction = $1 - \frac{23}{24} = \frac{1}{24}$.

Step 2 - Total hours in 2018: 2018 is not a leap year, so $365 \times 24 = 8760$ hours.

Step 3 - Exercising hours: $\frac{1}{24} \times 8760 = 365$ hours.

Tip: Take the LCM of the denominators first; the leftover fraction is the fastest route to the answer.

Answer: 365 [Go Back to Q4](#)

Q5.

Q. A designer mixes pink paint by combining red and white in the ratio 2 : 3. To prepare 5 litres of this pink paint, how many litres of red paint are needed?

Solution

Concept - Ratio sharing: The total mixture is split into equal parts set by the ratio; red takes its share of the whole.



Step 1 - Total parts: $2 + 3 = 5$ parts make the mixture.

Step 2 - Red share: $\text{Red} = \frac{2}{5} \times 5 = 2$ litres.

Tip: The fraction for one component is its ratio number over the sum of all ratio numbers.

Answer: 2 [Go Back to Q5](#)

Q6.

Q. A digital image is 1920 pixels wide. It is printed at a resolution of 300 pixels per inch (ppi). What is the printed width of the image in inches?

Solution

Concept - Pixels, ppi and print size: Printed length in inches = $\frac{\text{pixel count}}{\text{ppi}}$.

Step 1 - Divide: $\frac{1920}{300} = 6.4$ inches.

Tip: More ppi packs the same pixels into a smaller print, so raising ppi shrinks the printed size.

Answer: 6.4 [Go Back to Q6](#)

Q7.

Q. On a standard analog clock face, what is the angle in degrees between the hour hand and the minute hand at exactly 4:00?

Solution



Concept - Clock geometry: The 12 hour marks split the full 360° dial into 12 equal gaps of 30° each.

Step 1 - Position of the hands at 4:00: The minute hand points to 12; the hour hand points to 4, which is 4 marks away.

Step 2 - Angle: $4 \times 30^\circ = 120^\circ$.

Tip: Each hour mark is 30° ; each minute mark is 6° .

Answer: 120 [Go Back to Q7](#)

Q8.

Q. A straight wire of length 88 cm is bent to form a circle with no overlap. What is the radius of the circle in centimetres? (Use $\pi = \frac{22}{7}$)

Solution

Concept - Circumference: The wire length becomes the circumference, so $2\pi r = 88$.

Step 1 - Solve for the radius: $r = \frac{88}{2\pi} = \frac{88 \times 7}{2 \times 22} = \frac{616}{44} = 14$ cm.

Tip: With $\pi = \frac{22}{7}$, circumferences that are multiples of 44 give whole-number radii.

Answer: 14 [Go Back to Q8](#)

Q9.

Q. A printed poster is priced at 250 rupees. A shop first gives a 20% discount and then adds 5% tax on the discounted price. What is the final amount paid, in rupees?



Solution

Concept - Successive percentage change: Apply the discount first, then charge tax on the reduced price, not on the original.

Step 1 - After discount: $250 \times (1 - 0.20) = 250 \times 0.80 = 200$ rupees.

Step 2 - After tax: $200 \times (1 + 0.05) = 200 \times 1.05 = 210$ rupees.

Tip: Percentages must be applied in order; a discount then a tax does not cancel out.

Answer: 210 [Go Back to Q9](#)

Q10.

Q. A cube of side 4 units is painted on all six faces and cut into unit cubes. How many of the resulting unit cubes have at least one painted face?

Solution

Concept - Total minus hidden core: Cubes with at least one painted face are all the cubes except the fully hidden inner ones.

Step 1 - Total cubes: $4^3 = 64$.

Step 2 - Hidden (unpainted) cubes: $(4 - 2)^3 = 2^3 = 8$.

Step 3 - At least one painted face: $64 - 8 = 56$.

Tip: It is far quicker to subtract the inner block than to add corners, edges and faces separately.

Answer: 56 [Go Back to Q10](#)



Q11.

Q. Study the number series and find the next term: 2, 6, 12, 20, 30, ...

Solution

Concept - Product pattern: Each term is the product of two consecutive integers: $n(n + 1)$.

Step 1 - Check the pattern: $1 \times 2 = 2$, $2 \times 3 = 6$, $3 \times 4 = 12$, $4 \times 5 = 20$, $5 \times 6 = 30$.

Step 2 - Next term: $6 \times 7 = 42$.

Tip: The gaps grow by 2 each time (4, 6, 8, 10, 12), which also points straight to 42.

Answer: 42 [Go Back to Q11](#)

Q12.

Q. Three designers working together finish a brochure in 8 days. If 4 designers of the same working speed are put on an identical brochure, how many days will they take to finish it?

Solution

Concept - Inverse proportion in work: Total work is fixed as designer-days; more designers means fewer days.

Step 1 - Total work: 3 designers $\times$ 8 days = 24 designer-days.

Step 2 - Days for 4 designers: $\frac{24}{4} = 6$ days.



Tip: Keep the product (people $\times$ time) constant when the job size does not change.

Answer: 6 [Go Back to Q12](#)

Q13.

Q. A logo occupies 25% of the area of a rectangular poster that measures 20 cm $\times$ 16 cm. What is the area of the logo in square centimetres?

Solution

Concept - Percentage of an area: Find the poster area, then take the given percentage of it.

Step 1 - Poster area: $20 \times 16 = 320$ sq cm.

Step 2 - Logo area: $25\% \times 320 = 0.25 \times 320 = 80$ sq cm.

Tip: 25% is simply one-quarter, so dividing the area by 4 is the fastest step.

Answer: 80 [Go Back to Q13](#)

Q14.

Q. A regular pentagon is rotated about its centre so that it maps exactly onto itself. What is the smallest angle of rotation, in degrees, for which this happens?

Solution

Concept - Rotational symmetry: A regular polygon with n sides



looks the same after a rotation of $\frac{360^\circ}{n}$.

Step 1 - Apply to a pentagon: $n = 5$, so smallest angle = $\frac{360^\circ}{5} = 72^\circ$.

Tip: The order of rotational symmetry equals the number of sides for any regular polygon.

Answer: 72 [Go Back to Q14](#)

Q15.

Q. Which of the following terms relate(s) to printmaking?

- (A) Serigraphy
- (B) Lithography
- (C) Cartography
- (D) Etching

Solution

Concept - Printmaking techniques: Printmaking makes multiple impressions from a prepared surface; several named processes describe how the image is transferred.

Step 1 - Evaluate each option: A. Serigraphy - screen printing through a stencil on mesh. Related. B. Lithography - printing from a flat stone or plate using grease and water. Related. C. Cartography - the science of drawing maps, not a printing process. Not related. D. Etching - biting an image into a metal plate with acid, then printing it. Related.

Step 2 - State the set: Serigraphy, Lithography and Etching are



printmaking terms.

Tip: The suffix -graphy can mislead; cartography is about maps, not prints.

Answer: A, B, D [Go Back to Q15](#)

Q16.

Q. Which of the following are traditional Indian folk or tribal painting styles?

- (A) Cubism
- (B) Madhubani
- (C) Warli
- (D) Gond

Solution

Concept - Indian folk art: India has many regional painting traditions passed down within communities.

Step 1 - Evaluate each option: A. Cubism - a Western modern-art movement, not an Indian folk style. Not correct. B. Madhubani - a folk painting tradition from the Mithila region of Bihar. Correct. C. Warli - a tribal painting style from Maharashtra using simple white figures. Correct. D. Gond - a tribal art form from central India known for fine dotted patterns. Correct.

Step 2 - State the set: Madhubani, Warli and Gond are Indian folk styles.

Tip: Cubism is the odd one out here; the rest are all rooted in Indian communities.



Answer: B, C, D [Go Back to Q16](#)

Q17.

Q. Which of the following are vector graphic file formats (as opposed to raster formats)?

- (A) JPEG
- (B) PNG
- (C) SVG
- (D) EPS

Solution

Concept - Vector vs raster: Raster files store a grid of pixels; vector files store shapes as maths, so they scale without blur.

Step 1 - Evaluate each option: A. JPEG - a compressed raster (pixel) format. Not vector. B. PNG - a lossless raster format. Not vector. C. SVG - Scalable Vector Graphics, defined by paths and points. Vector. D. EPS - Encapsulated PostScript, commonly a vector format. Vector.

Step 2 - State the set: SVG and EPS are vector formats.

Tip: If enlarging the file keeps edges crisp, it is vector; if it pixelates, it is raster.

Answer: C, D [Go Back to Q17](#)

Q18.



Q. Which of the following typefaces is classified as a serif typeface?

- (A) Helvetica
- (B) Times New Roman
- (C) Futura
- (D) Arial

Solution

Concept - Serif vs sans-serif: Serif faces carry small finishing strokes at the ends of letters; sans-serif faces do not.

Step 1 - Evaluate each option: A. Helvetica - a classic sans-serif. Not serif. B. Times New Roman - a widely used serif face. Correct. C. Futura - a geometric sans-serif. Not serif. D. Arial - a sans-serif close to Helvetica. Not serif.

Step 2 - State the set: Only Times New Roman is a serif typeface.

Tip: Look for the tiny feet on letters like the capital I; serifs have them, sans-serifs do not.

Answer: B [Go Back to Q18](#)

Q19.

Q. Which of the following are Indian classical dance forms recognised by the Sangeet Natak Akademi?

- (A) Odissi
- (B) Manipuri
- (C) Mohiniyattam
- (D) Sattriya



Solution

Concept - Indian classical dance: A fixed set of dance forms is officially recognised as classical in India.

Step 1 - Evaluate each option: A. Odissi - the classical dance of Odisha. Correct. B. Manipuri - the classical dance of Manipur. Correct. C. Mohiniyattam - the classical solo dance of Kerala. Correct. D. Sattriya - the classical dance of Assam, from its monasteries. Correct.

Step 2 - State the set: All four are recognised classical dance forms.

Tip: The recognised list also includes Bharatanatyam, Kathak, Kathakali and Kuchipudi.

Answer: A, B, C, D [Go Back to Q19](#)

Q20.

Q. Which of the following figures are associated with the De Stijl movement?

- (A) Antoni Gaudi
- (B) Piet Mondrian
- (C) Le Corbusier
- (D) Gerrit Rietveld

Solution

Concept - De Stijl: A Dutch movement (from 1917) built on



straight lines, rectangles and primary colours with black, white and grey.

Step 1 - Evaluate each option: A. Antoni Gaudi - a Spanish Art Nouveau architect of curved, organic forms. Not De Stijl. B. Piet Mondrian - a leading De Stijl painter of grid compositions. Correct. C. Le Corbusier - a Swiss-French modernist, but not part of De Stijl. Not correct. D. Gerrit Rietveld - designer of the Red and Blue Chair and a De Stijl member. Correct.

Step 2 - State the set: Mondrian and Rietveld belong to De Stijl.

Tip: Think primary-colour grids and the Red and Blue Chair to spot De Stijl.

Answer: B, D [Go Back to Q20](#)

Q21.

Q. Which of the following are principles of design (rather than elements of design)?

- (A) Balance
- (B) Line
- (C) Contrast
- (D) Emphasis

Solution

Concept - Elements vs principles: Elements are the raw ingredients (line, shape, colour); principles are how those ingredients are arranged (balance, contrast, emphasis).



Step 1 - Evaluate each option: A. Balance - arranging visual weight evenly; a principle. Correct. B. Line - a basic building block; an element, not a principle. Not correct. C. Contrast - using difference to create interest; a principle. Correct. D. Emphasis - drawing attention to a focal point; a principle. Correct.

Step 2 - State the set: Balance, Contrast and Emphasis are principles.

Tip: If a word names a thing you draw, it is an element; if it names how you organise things, it is a principle.

Answer: A, C, D [Go Back to Q21](#)

Q22.

Q. Which of the following are traditional Indian textile crafts?

- (A) Origami
- (B) Ikebana
- (C) Bandhani
- (D) Kalamkari

Solution

Concept - Indian textile crafts: India has rich dyeing and hand-painting traditions applied to cloth.

Step 1 - Evaluate each option: A. Origami - the Japanese art of paper folding. Not a textile craft. B. Ikebana - the Japanese art of flower arrangement. Not a textile craft. C. Bandhani - a tie-and-dye cloth technique from Gujarat and Rajasthan. Correct. D. Kalamkari - hand-painted or block-printed cotton work from Andhra Pradesh.



Correct.

Step 2 - State the set: Bandhani and Kalamkari are Indian textile crafts.

Tip: Origami and Ikebana are both Japanese; the other two are Indian cloth traditions.

Answer: C, D [Go Back to Q22](#)

Q23.

Q. Which of the following is measured in dots per inch (dpi)?

- (A) Font weight
- (B) Colour temperature
- (C) Print resolution
- (D) Screen refresh rate

Solution

Concept - Units of image and display specs: Each property has its own unit; dpi counts printed dots packed into one inch.

Step 1 - Evaluate each option: A. Font weight - described as light, regular or bold, or a numeric weight; not dpi. Not correct. B. Colour temperature - measured in kelvin. Not correct. C. Print resolution - measured in dots per inch. Correct. D. Screen refresh rate - measured in hertz. Not correct.

Step 2 - State the set: Only print resolution uses dpi.

Tip: Match the unit to the property: dpi for print, ppi for pixels, hertz for refresh, kelvin for colour temperature.



Answer: C [Go Back to Q23](#)

Q24.

Q. Which of the following are UNESCO World Heritage Sites located in India?

- (A) Taj Mahal
- (B) Group of Monuments at Hampi
- (C) Khajuraho Group of Monuments
- (D) Konark Sun Temple

Solution

Concept - Indian World Heritage Sites: UNESCO lists sites of outstanding cultural value; India has many.

Step 1 - Evaluate each option: A. Taj Mahal in Agra - inscribed in 1983. Correct. B. Group of Monuments at Hampi in Karnataka - inscribed in 1986. Correct. C. Khajuraho Group of Monuments in Madhya Pradesh - inscribed in 1986. Correct. D. Konark Sun Temple in Odisha - inscribed in 1984. Correct.

Step 2 - State the set: All four are Indian World Heritage Sites.

Tip: These four are among the most cited Indian cultural sites in general-awareness questions.

Answer: A, B, C, D [Go Back to Q24](#)

Q25.

Q. Which of the following are Gestalt principles of visual



perception?

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

Solution

Concept - Gestalt principles: These describe how the eye groups separate marks into a whole.

Step 1 - Evaluate each option: A. Refraction - the bending of light, a physics idea, not a Gestalt principle. Not correct. B. Proximity - items placed near each other are read as a group. Correct. C. Similarity - items that look alike are read as belonging together. Correct. D. Closure - the mind completes an incomplete shape. Correct.

Step 2 - State the set: Proximity, Similarity and Closure are Gestalt principles.

Tip: Gestalt is about grouping and completion; refraction is unrelated optics.

Answer: B, C, D [Go Back to Q25](#)

Q26.

Q. Which of the following are well-known Indian architects?

- (A) B. V. Doshi
- (B) Zaha Hadid



- (C) Frank Gehry
(D) Charles Correa

Solution

Concept - Indian architects: Several Indian architects are internationally celebrated for modern Indian buildings.

Step 1 - Evaluate each option: A. B. V. Doshi - Indian architect and the first from India to win the Pritzker Prize. Correct. B. Zaha Hadid - an Iraqi-British architect. Not Indian. C. Frank Gehry - an American-Canadian architect. Not Indian. D. Charles Correa - a major Indian architect and urban planner. Correct.

Step 2 - State the set: Doshi and Correa are Indian architects.

Tip: Hadid and Gehry are global names but not Indian; the other two shaped modern Indian architecture.

Answer: A, D [Go Back to Q26](#)

Q27.

Q. Which of the following are typography terms describing the spacing of type?

- (A) Kerning
(B) Leading
(C) Tracking
(D) Dithering

Solution



Concept - Type spacing vocabulary: Typography has specific words for the space between letters, lines and groups of letters.

Step 1 - Evaluate each option: A. Kerning - adjusting space between a specific pair of letters. Correct. B. Leading - the vertical space between lines of type. Correct. C. Tracking - uniform spacing across a run of letters. Correct. D. Dithering - mixing pixels to simulate colours in images, not a type-spacing term. Not correct.

Step 2 - State the set: Kerning, Leading and Tracking are type-spacing terms.

Tip: Dithering belongs to image processing, not to setting type.

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

Q28.

Q. Which of the following art movements is Salvador Dali most closely associated with?

- (A) Impressionism
- (B) Cubism
- (C) Bauhaus
- (D) Surrealism

Solution

Concept - Salvador Dali and art movements: Dali is famous for dreamlike, irrational imagery.

Step 1 - Evaluate each option: A. Impressionism - captures fleeting light, linked to Monet and Renoir, not Dali. Not correct.



B. Cubism - fragmented geometry of Picasso and Braque, not Dali. Not correct. C. Bauhaus - a German design school, not a Dali movement. Not correct. D. Surrealism - dream imagery and the subconscious, central to Dali. Correct.

Step 2 - State the set: Dali is a Surrealist.

Tip: Think of Dali's melting clocks to fix him firmly in Surrealism.

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

Q29.

Q. Which of the following are concepts drawn from Japanese art and design?

- (A) Feng Shui
- (B) Wabi-sabi
- (C) Ma
- (D) Rangoli

Solution

Concept - Japanese design ideas: Japanese aesthetics value imperfection and empty space.

Step 1 - Evaluate each option: A. Feng Shui - a Chinese practice of arranging space, not Japanese. Not correct. B. Wabi-sabi - the Japanese appreciation of imperfect, impermanent beauty. Correct. C. Ma - the Japanese idea of meaningful negative space or pause. Correct. D. Rangoli - an Indian floor-decoration art. Not correct.

Step 2 - State the set: Wabi-sabi and Ma are Japanese concepts.



Tip: Feng Shui is Chinese and Rangoli is Indian; only the middle two are Japanese.

Answer: B, C [Go Back to Q29](#)

Q30.

Q. Study the series and find the next term: 5, 10, 20, 40, ...

- (A) 80
- (B) 70
- (C) 100
- (D) 60

Solution

Concept - Geometric progression: Each term is the previous term multiplied by a fixed ratio.

Step 1 - Find the ratio: $10 \div 5 = 2$, and the same doubling holds throughout.

Step 2 - Next term: $40 \times 2 = 80$.

Tip: When each term doubles, the series grows fast; check the ratio between the first two terms.

Answer: A [Go Back to Q30](#)

Q31.

Q. Who painted the famous portrait known as the Mona Lisa?

- (A) Michelangelo
- (B) Leonardo da Vinci



- (C) Raphael
(D) Sandro Botticelli
-

Solution

Concept - Renaissance art: The Mona Lisa is a High Renaissance portrait admired for its soft modelling and mysterious smile.

Step 1 - Eliminate: Michelangelo is known for the Sistine Chapel and David; Raphael for his Madonnas; Botticelli for The Birth of Venus.

Step 2 - Identify: Leonardo da Vinci painted the Mona Lisa, now in the Louvre.

Tip: Link Leonardo to both the Mona Lisa and The Last Supper.

Answer: B [Go Back to Q31](#)

Q32.

Q. Fine Pashmina shawls are traditionally associated with which Indian region?

- (A) Kutch
(B) Kanchipuram
(C) Kashmir
(D) Varanasi
-

Solution

Concept - Indian textile geography: Different regions are famous for particular fabrics and weaves.



Step 1 - Eliminate: Kutch is known for embroidery, Kanchipuram for silk sarees, and Varanasi for Banarasi brocade.

Step 2 - Identify: Pashmina, woven from fine mountain-goat wool, comes from Kashmir.

Tip: Pashmina and the cold Himalayan climate go together; think Kashmir.

Answer: C [Go Back to Q32](#)

Q33.

Q. In typography, the adjustment of space between two particular adjacent letters is called:

- (A) Leading
- (B) Tracking
- (C) Baseline
- (D) Kerning

Solution

Concept - Type spacing terms: Each spacing task in typography has its own name.

Step 1 - Eliminate: Leading is the space between lines, tracking is uniform spacing across many letters, and the baseline is the line the letters sit on.

Step 2 - Identify: Adjusting the gap between one specific pair of letters is kerning.

Tip: Kerning is a pair; tracking is a whole run.



Answer: D [Go Back to Q33](#)

Q34.

Q. On the traditional artist's (RYB) colour wheel, which colour is the complement of blue?

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

Solution

Concept - Complementary colours: Complements sit directly opposite each other on the colour wheel.

Step 1 - Locate blue: On the RYB wheel blue is opposite orange.

Step 2 - Confirm: Blue pairs with orange, just as red pairs with green and yellow with violet.

Tip: Complements placed side by side make each other look brighter.

Answer: A [Go Back to Q34](#)

Q35.

Q. In a code, the word CAT is written as 3-1-20 using the position of each letter in the alphabet. How would DOG be written in the same code?

- (A) 4-14-7



- (B) 4-15-7
 - (C) 3-15-7
 - (D) 4-15-8
-

Solution

Concept - Letter-to-number coding: Each letter is replaced by its position in the alphabet (A = 1, B = 2, and so on).

Step 1 - Encode each letter: D is the 4th letter, O is the 15th, and G is the 7th.

Step 2 - Assemble: DOG becomes 4-15-7.

Tip: Memorise anchor points: E = 5, J = 10, O = 15, T = 20, Y = 25.

Answer: B [Go Back to Q35](#)

Q36.

Q. The Lotus Temple in New Delhi is a house of worship associated with which faith?

- (A) Hinduism
 - (B) Sikhism
 - (C) the Bahai Faith
 - (D) Jainism
-

Solution

Concept - Modern Indian architecture: The Lotus Temple is a striking flower-shaped building completed in 1986.



Step 1 - Recall its purpose: It is open to people of all religions and is a place of quiet prayer.

Step 2 - Identify: It is a Bahai House of Worship, one of several such temples worldwide.

Tip: Its lotus-petal form and openness to all faiths mark it as a Bahai temple.

Answer: C [Go Back to Q36](#)

Q37.

Q. How many edges does a cube have?

- (A) 6
- (B) 8
- (C) 10
- (D) 12

Solution

Concept - Parts of a cube: A cube has faces, vertices and edges that can be counted directly.

Step 1 - Count: A cube has 6 faces and 8 vertices, and 12 edges join those vertices.

Step 2 - Check with Euler: Faces + vertices – edges = $6 + 8 - 12 = 2$, which is correct for any simple solid.

Tip: Remember 6 faces, 8 corners, 12 edges for the cube.

Answer: D [Go Back to Q37](#)



Q38.

Q. Art Nouveau, popular around 1890 to 1910, is best recognised for which visual quality?

- (A) Flowing organic lines inspired by plants and nature
- (B) Rigid modular grids and repeated squares
- (C) Fragmented geometric planes seen from many viewpoints
- (D) Bold flat blocks of primary colour with black outlines

Solution

Concept - Art Nouveau style: Art Nouveau took its cues from natural forms such as vines, flowers and flowing hair.

Step 1 - Eliminate: Rigid grids point to modernism or De Stijl; fragmented planes describe Cubism; flat primary blocks describe De Stijl too.

Step 2 - Identify: The curving, plant-like lines are the signature of Art Nouveau.

Tip: Think of the whiplash curve and works by Alphonse Mucha.

Answer: A [Go Back to Q38](#)

Q39.

Q. Which of the following is a vector graphic file format?

- (A) JPEG
- (B) SVG
- (C) PNG
- (D) GIF



Solution

Concept - Vector vs raster: Vector files store shapes as maths, so they scale without losing sharpness; raster files store pixels.

Step 1 - Eliminate: JPEG, PNG and GIF are all raster (pixel-based) formats.

Step 2 - Identify: SVG stands for Scalable Vector Graphics and is a vector format.

Tip: If the format name contains vector, or the image never pixelates when enlarged, it is vector.

Answer: B [Go Back to Q39](#)

Q40.

Q. The Ashoka Chakra shown at the centre of the Indian national flag has how many spokes?

- (A) 12
- (B) 18
- (C) 24
- (D) 32

Solution

Concept - National symbols: The navy-blue wheel on the flag is based on the wheel from the Lion Capital at Sarnath.

Step 1 - Recall the count: The chakra has a fixed number of evenly spaced spokes.



Step 2 - Identify: It has 24 spokes, each often read as a value or hour of the day.

Tip: Twenty-four spokes stand for progress and the passing of time.

Answer: C [Go Back to Q40](#)

Q41.

Q. Pointing to a photograph, a man says, "She is the daughter of my grandfather's only son." How is the girl in the photograph related to the man?

- (A) Mother
- (B) Aunt
- (C) Cousin
- (D) Sister

Solution

Concept - Blood relations: Work through the chain of relationships one link at a time.

Step 1 - Identify the grandfather's only son: The man's grandfather's only son is the man's own father.

Step 2 - Identify the girl: She is the daughter of the man's father, which makes her the man's sister.

Tip: Replace each phrase with a simple relation before naming the final link.

Answer: D [Go Back to Q41](#)

Q42.



Q. The Bauhaus, an influential school of art, craft and design, was founded in 1919 by whom?

- (A) Walter Gropius
- (B) Le Corbusier
- (C) Mies van der Rohe
- (D) Frank Lloyd Wright

Solution

Concept - Design history: The Bauhaus united fine art with craft and industry and shaped modern design.

Step 1 - Eliminate: Mies van der Rohe led the Bauhaus later but did not found it; Le Corbusier and Frank Lloyd Wright were not its founders.

Step 2 - Identify: Walter Gropius founded the Bauhaus in Weimar, Germany, in 1919.

Tip: Gropius founded it, Mies van der Rohe was its last director before it closed.

Answer: A [Go Back to Q42](#)

Q43.

Q. The golden ratio, often used in art and design for pleasing proportions, is approximately equal to:

- (A) 1.414
- (B) 1.618
- (C) 2.718



(D) 3.142

Solution

Concept - Golden ratio: The golden ratio, written φ , appears when a line is split so the whole is to the larger part as the larger is to the smaller.

Step 1 - Eliminate: 1.414 is $\sqrt{2}$, 2.718 is e , and 3.142 is π .

Step 2 - Identify: The golden ratio is about 1.618.

Tip: $\varphi = \frac{1 + \sqrt{5}}{2} \approx 1.618$; keep it separate from π and e .

Answer: B [Go Back to Q43](#)

Q44.

Q. Warli painting, known for simple white figures made of triangles and circles on an earthy background, originates from which Indian state?

- (A) Rajasthan
- (B) Bihar
- (C) Maharashtra
- (D) Odisha

Solution

Concept - Indian tribal art: Warli is the art of a tribal community and depicts daily life and nature.

Step 1 - Eliminate: Madhubani is from Bihar, Pattachitra from



Odisha, and Rajasthan is known for miniature and Phad painting.

Step 2 - Identify: Warli painting comes from the tribal areas of Maharashtra.

Tip: Warli figures are basic triangles and circles; the style belongs to Maharashtra.

Answer: C [Go Back to Q44](#)

Q45.

Q. Which colour model is standard for full-colour printing?

- (A) RGB
- (B) HSL
- (C) HSB
- (D) CMYK

Solution

Concept - Colour models for print vs screen: Screens add light while printers layer inks that subtract light.

Step 1 - Eliminate: RGB is for screens; HSL and HSB are ways to describe colour but not print ink sets.

Step 2 - Identify: Printing uses CMYK: Cyan, Magenta, Yellow and Key (black) inks.

Tip: Remember RGB for screens, CMYK for print.

Answer: D [Go Back to Q45](#)

Q46.



Q. Which one of the following does not belong with the others?

- (A) Triangle
- (B) Square
- (C) Rectangle
- (D) Rhombus

Solution

Concept - Odd one out by property: Group the shapes by a shared feature and find the exception.

Step 1 - Compare: Square, rectangle and rhombus are all four-sided figures (quadrilaterals).

Step 2 - Identify: The triangle has only three sides, so it does not belong.

Tip: Look for the property shared by most items; the one lacking it is the odd one out.

Answer: A [Go Back to Q46](#)

Q47.

Q. The Sydney Opera House, famous for its sail-like shells, was designed by which architect?

- (A) Frank Gehry
- (B) Jorn Utzon
- (C) Zaha Hadid
- (D) I. M. Pei



Solution

Concept - Iconic modern buildings: The Sydney Opera House is one of the most recognisable buildings of the 20th century.

Step 1 - Eliminate: Gehry designed the Guggenheim in Bilbao, Pei the Louvre Pyramid, and Hadid many curved contemporary works.

Step 2 - Identify: The Danish architect Jorn Utzon designed the Sydney Opera House.

Tip: Link the white shell roofs of Sydney to Jorn Utzon.

Answer: B [Go Back to Q47](#)

Q48.

Q. What is the measure of each interior angle of a regular hexagon?

- (A) 90 degrees
- (B) 108 degrees
- (C) 120 degrees
- (D) 135 degrees

Solution

Concept - Interior angle of a regular polygon: Each interior angle of a regular n -gon is $\frac{(n-2) \times 180^\circ}{n}$.

Step 1 - Substitute $n = 6$: $\frac{(6-2) \times 180^\circ}{6} = \frac{4 \times 180^\circ}{6}$.

Step 2 - Simplify: $\frac{720^\circ}{6} = 120^\circ$.

Tip: A square gives 90° and a regular pentagon 108° ; a hexagon



gives 120° .

Answer: C [Go Back to Q48](#)

Q49.

Q. Which Indian city is especially famous for its traditional blue pottery?

- (A) Khurja
- (B) Moradabad
- (C) Bhuj
- (D) Jaipur

Solution

Concept - Indian craft centres: Different towns are known for particular crafts.

Step 1 - Eliminate: Moradabad is famed for brassware and Bhuj for Kutch embroidery; Khurja makes ceramics but not the classic blue-glaze style.

Step 2 - Identify: Jaipur is renowned for its distinctive blue pottery with cobalt and turquoise glazes.

Tip: The classic Persian-influenced blue pottery of India is tied to Jaipur.

Answer: D [Go Back to Q49](#)

Q50.



Q. The illusion that a rapid sequence of still images appears to move smoothly is explained mainly by which principle?

- (A) Persistence of vision
- (B) Colour subtraction
- (C) Linear perspective
- (D) Surface tension

Solution

Concept - How motion pictures work: The eye briefly holds an image after it disappears, blending quick frames into motion.

Step 1 - Eliminate: Colour subtraction is about mixing inks, linear perspective is about depth on a flat surface, and surface tension is a liquid property.

Step 2 - Identify: Persistence of vision is the principle behind film and animation.

Tip: Persistence of vision plus quick frames equals the illusion of movement.

Answer: A [Go Back to Q50](#)

Q51.

Q. The typeface Helvetica is classified under which category?

- (A) Serif
- (B) Sans-serif
- (C) Script
- (D) Blackletter



Solution

Concept - Typeface classification: Type is grouped by the shape and finishing of its letters.

Step 1 - Eliminate: Serif faces have small end strokes, script faces imitate handwriting, and blackletter is a heavy medieval style.

Step 2 - Identify: Helvetica has clean strokes with no serifs, making it a sans-serif.

Tip: Sans means without, so sans-serif means without the little feet.

Answer: B [Go Back to Q51](#)

Q52.

Q. Rangoli, a traditional Indian decorative art, is most commonly created using which of the following?

- (A) Carved wood panels
- (B) Cast metal plates
- (C) Coloured powders and flowers on the floor
- (D) Woven silk threads

Solution

Concept - Indian floor art: Rangoli is made at entrances during festivals to welcome guests and good fortune.

Step 1 - Eliminate: Wood carving, metal casting and silk weaving are separate crafts, not how rangoli is made.



Step 2 - Identify: Rangoli patterns are laid on the floor with coloured powders, rice, or flower petals.

Tip: Rangoli is temporary floor decoration made from loose coloured material.

Answer: C [Go Back to Q52](#)

Q53.

Q. In a certain code, each letter of a word is shifted one place forward in the alphabet, so MODEL becomes NPEFM. Using the same rule, what is the code for CHAIR?

- (A) BGZHQ
- (B) DIBKS
- (C) DJBJS
- (D) DIBJS

Solution

Concept - Shift coding: Replace each letter with the letter one position later in the alphabet.

Step 1 - Shift each letter of CHAIR: C to D, H to I, A to B, I to J, R to S.

Step 2 - Assemble: The code is DIBJS.

Tip: Move forward, not back; option A shifts the wrong way and the others slip on one letter.

Answer: D [Go Back to Q53](#)

Q54.



Q. In the additive colour model used by screens, the three primary colours are:

- (A) Red, Green, Blue
- (B) Red, Yellow, Blue
- (C) Cyan, Magenta, Yellow
- (D) Red, Green, Yellow

Solution

Concept - Additive colour: Screens create colour by adding beams of coloured light, which combine to white.

Step 1 - Eliminate: Red, Yellow, Blue are the traditional artists' primaries; Cyan, Magenta, Yellow are the subtractive print primaries.

Step 2 - Identify: The additive primaries are Red, Green and Blue (RGB).

Tip: Light adds to white (RGB); ink subtracts toward black (CMY).

Answer: A [Go Back to Q54](#)

Q55.

Q. Ebru is a traditional art form that involves:

- (A) Carving sand into sculptures
- (B) Marbling patterns on paper from floating paint
- (C) Blowing molten glass into shapes
- (D) Carving figures out of ice



Solution

Concept - Traditional decorative arts: Ebru is a historic Turkish craft producing swirling, marble-like patterns.

Step 1 - Understand the process: Paints are floated on a thickened water bath, swirled into patterns, and lifted onto paper.

Step 2 - Identify: Ebru is the art of paper marbling.

Tip: Ebru equals marbling; the floating-paint step is its signature.

Answer: B [Go Back to Q55](#)

Q56.

Q. How many faces does a triangular prism have?

- (A) 3
- (B) 4
- (C) 5
- (D) 6

Solution

Concept - Faces of a prism: A prism has two identical end shapes joined by rectangular side faces.

Step 1 - Count the ends: A triangular prism has 2 triangular end faces.

Step 2 - Count the sides: The triangle has 3 sides, giving 3 rectangular faces. Total = $2 + 3 = 5$.

Tip: Prism faces = 2 ends + the number of sides of the end shape.



Answer: C [Go Back to Q56](#)

Q57.

Q. The rule of thirds is a common guideline used in which of the following?

- (A) Metal welding
- (B) Kerning of type
- (C) Cooking measurements
- (D) Photography and visual composition

Solution

Concept - Composition guideline: The rule of thirds divides a frame into a 3×3 grid and places key subjects along the lines or at their crossings.

Step 1 - Eliminate: Welding, kerning and cooking are unrelated to framing an image.

Step 2 - Identify: The rule of thirds guides photography and visual composition for balanced, engaging images.

Tip: Place the subject on a third line rather than dead centre for a stronger composition.

Answer: D [Go Back to Q57](#)

Q58.

Q (Drawing). It is mid-morning in a crowded weekly vegetable market. Handcarts loaded with tomatoes, brinjals, gourds and greens line a narrow lane, jute sacks spill open on the ground, and



shoppers with cloth bags move between the stalls. The focal subject is a woman vegetable vendor seated behind her cart, weighing a heap of tomatoes on a two-pan hand balance that she holds up at arm's length while a customer points at the pans. Imagine this scene and draw it with the vendor and her raised balance as the clear centre of interest. Show the loaded cart, the piles of produce, the ground sacks, at least two other shoppers, and the neighbouring stalls receding down the lane.

Note: Make pencil sketches only. Do not use colour.

Evaluation criteria: observation; composition; perspective and proportion; quality of lines; attention to detail.

Model Approach and Evaluation

Read this as a busy market packed with texture, held together by one clear transaction. Plan the crowd before you draw a single vegetable.

Step 1 - Set perspective and the lane: Choose a standing eye level and let the market lane recede to a vanishing point down its centre. Draw the near cart large and the far stalls small so depth is obvious. Keep the ground line clear so carts, sacks and feet all sit on the same floor.

Step 2 - Compose in layers: Build three planes - the vendor and her cart up front, the pointing customer and nearby shoppers in the middle, the tapering row of stalls behind. Overlap produce piles and figures so the market feels full without turning into clutter.

Step 3 - Make the focal subject win: Put the raised hand balance near a strong third of the frame and give the two pans the sharpest



lines and the most negative space around them. Aim the customer's pointing arm and the cart edges toward the balance so the eye is led straight to it.

Step 4 - Fix proportion, then refine line quality: Check the vendor's seated proportions and that tomatoes, sacks and the balance read at believable sizes. Then push line weight - crisp dark strokes on the vendor, balance and front produce, and thin light strokes for the distant stalls.

Tip: A hand balance only reads as one if the beam is level and the two strings hang truly vertical. Draw those lines with a light ruler-straight touch so the object stays convincing. [Go Back to Q58](#)

Q59.

Q (Design Aptitude). Small children spill water constantly from open glasses and struggle with adult bottle caps, while parents cannot tell how much their child has actually drunk during the day. Design a drinking cup or bottle for a three to five year old that resists spills when knocked over, is easy for small hands to open and close without help, and lets a parent see at a glance how much water is left. Show your design in two states: (1) closed and spill-safe, for example when it is dropped or tipped in a school bag, and (2) open and ready for the child to drink.

Note: Make pencil sketches only. Do not use colour. Explain your design only through visuals and short labels; do not write separate explanations.

Model Approach and Evaluation



Approach this as a safety and usability problem for tiny, clumsy hands. Sketch the real object and the mechanism, not decoration.

Step 1 - Nail the requirements: Hold the constraints clearly - no leak when tipped, an open-close action a small child can manage alone, a soft spout that is safe on teeth, and a way to read the water level fast. Let each drawn feature answer one of these.

Step 2 - Show the two required states: Draw state one as the sealed cup lying on its side with a dashed line showing water staying put behind a closed valve. Draw state two upright with the spout flipped up or twisted open and an arrow showing the drinking flow. Keep it recognisably the same cup.

Step 3 - Label features, do not write essays: Use short leader-line labels - "one-flip lid", "soft silicone spout", "self-seal valve", "level window", "grip ribs". Two or three words each, pointing at the part.

Step 4 - Prove it works: Add a small section view through the valve showing how it closes when not sucked, and a tiny three-step hand sequence of a child flipping it open. This proves both the spill safety and the easy one-hand action.

Tip: The self-sealing valve is the heart of the design. Give it a clear cutaway so the examiner sees exactly why the water does not escape when the cup is knocked over. [Go Back to Q59](#)



Answer Key (Part A)

Section 1 - NAT (Numerical Answer Type)

Q1	Q2	Q3	Q4	Q5	Q6	Q7
8	27	1.5	365	2	6.4	120

Q8	Q9	Q10	Q11	Q12	Q13	Q14
14	210	56	42	6	80	72

Section 2 - MSQ (Multiple Select - one or more correct)

Q15	Q16	Q17	Q18	Q19
A, B, D	B, C, D	C, D	B	A, B, C, D

Q20	Q21	Q22	Q23	Q24
B, D	A, C, D	C, D	C	A, B, C, D

Q25	Q26	Q27	Q28	Q29
B, C, D	A, D	A, B, C	D	B, C

Section 3 - MCQ (single correct)

Q30	Q31	Q32	Q33	Q34	Q35	Q36
A	B	C	D	A	B	C

Q37	Q38	Q39	Q40	Q41	Q42	Q43
D	A	B	C	D	A	B

Q44	Q45	Q46	Q47	Q48	Q49	Q50
C	D	A	B	C	D	A



Q51	Q52	Q53	Q54	Q55	Q56	Q57
B	C	D	A	B	C	D

Part B (Q58-Q59) is subjective; see the Model Approach for each under Detailed Solutions.

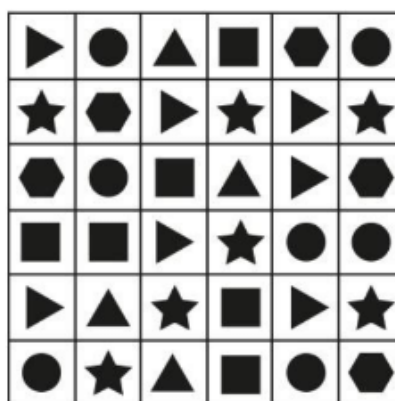


Appendix: Visual Reasoning

Practice from Past UCEED Papers

These are **real questions from past UCEED papers**, included so you can practise on the actual figure style the exam uses. They are visual-reasoning questions, so work each one out yourself - no answer key is given here (this mirrors how such questions feel in the real test). A short **How to approach** note follows each figure.

P1. (Past UCEED) How many times does the shape sequence (shown on the top) appear in the grid below? The sequence may appear top-to-bottom, bottom-to-top, left-to-right, right-to-left or at an angle.



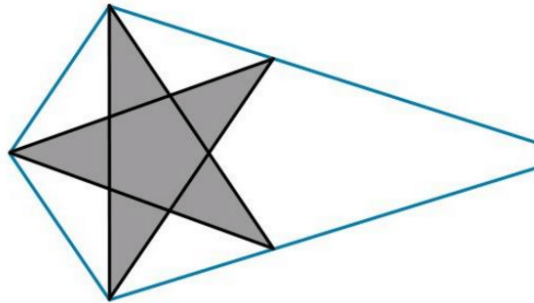
How to approach

Study the figure carefully and note what is fixed and what changes. Break the problem into smaller parts, use any symmetry in the figure, and count or compute each part systematically before combining. A quick rough redraw usually makes the answer clear.

P2. (Past UCEED) What is the maximum number of stars that can be



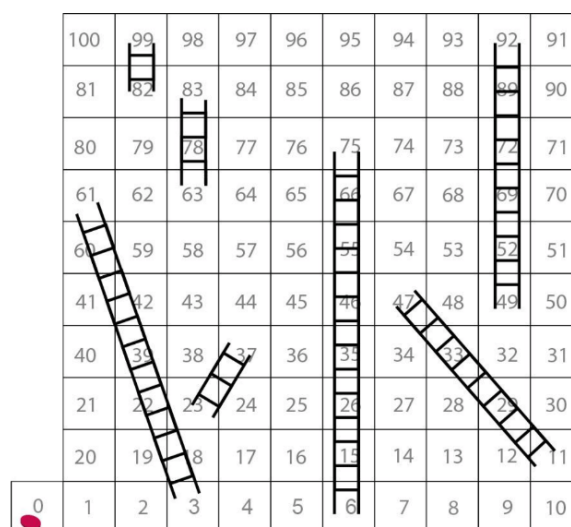
packed inside the blue colour boundary including the one that is shown in the image below? The stars can be scaled but should not overlap. At least 4 points of every star should touch the blue colour boundary.



How to approach

Study the figure carefully and note what is fixed and what changes. Break the problem into smaller parts, use any symmetry in the figure, and count or compute each part systematically before combining. A quick rough redraw usually makes the answer clear.

- P3. (Past UCEED)** A dice throw can result in the numbers 2,3,5 or 6. Every 4th throw will result in 3. What is the minimum number of times the dice has to be thrown for the pawn to move from zero to reach exactly at 100?



How to approach

Study the figure carefully and note what is fixed and what changes. Break the problem into smaller parts, use any symmetry in the figure, and count or compute each part systematically before combining. A quick rough redraw usually makes the answer clear.

P4. (Past UCEED) Count the number of human figures in the picture.

**How to approach**

Study the figure carefully and note what is fixed and what changes. Break the problem into smaller parts, use any symmetry in the figure, and count or compute each part systematically before combining. A quick rough redraw usually makes the answer clear.

