

MAHCET (MAH-MBA/MMS-CET) Sample Paper 4

Abstract Reasoning

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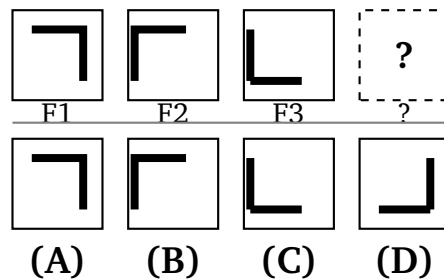
Instructions

- Total Questions: **25** Marks: **25** (1 mark each) Duration: **19 minutes**
- **No negative marking.** Each correct answer carries 1 mark.
- This is a Computer Based Test (CBT). No calculator is permitted.
- Each question has **4 options (A, B, C, D)**. Select the best answer.
- Sections: Series (Q1–Q10), Analogies (Q11–Q17), Odd-One-Out (Q18–Q22), Matrix (Q23–Q24), Mirror Image (Q25).

Section 1: Series (Q1 – Q10)

Directions: Each question shows a series of figures. Identify the figure that should replace the question mark (?).

Q1. Which figure should replace the question mark (?) in the series below?



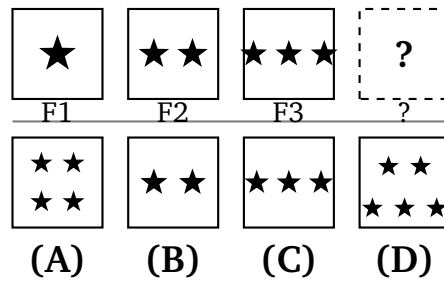
Answer: (D)

Solution

The L-shape (like Γ) rotates 90° CCW at each step: **F1**: corner at top-right (Γ) $\rightarrow$ **F2**: corner at top-left $\rightarrow$ **F3**: corner at bottom-left (standard L) $\rightarrow$ **?**: corner at bottom-right (reverse-L at bottom). This matches **Option D**.

Q2. Which figure should replace the question mark (?) in the series below?



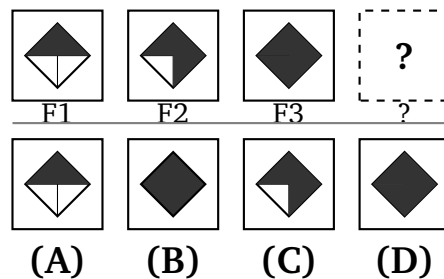


Answer: (A)

Solution

The number of 5-pointed stars increases by 1 each step: **F1=1, F2=2, F3=3, ?=4**. Option A shows 4 stars arranged in a 2×2 grid. **Answer: A.**

Q3. Which figure should replace the question mark (?) in the series below?

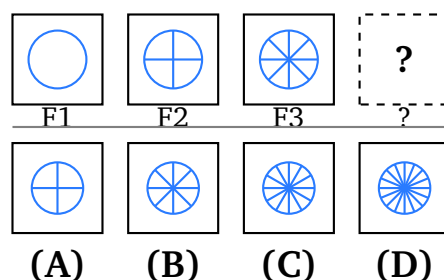


Answer: (B)

Solution

A diamond divided into 4 triangular quadrants fills clockwise: **F1=top only; F2=top+right; F3=top+right+bottom; ?=all 4 quadrants filled**. Option B shows all 4 quadrants filled. **Answer: B.**

Q4. Which figure should replace the question mark (?) in the series below?

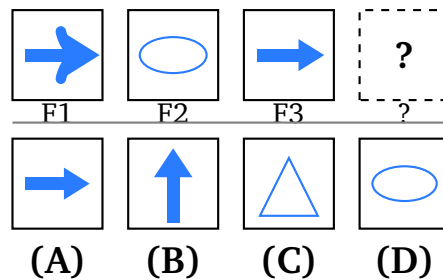


Answer: (C)**Solution**

The number of spokes in the circle increases by 2 each step: **F1=0**, **F2=2**, **F3=4**, **?=6**. Option C shows a circle with 6 equally-spaced spokes (at 30° intervals).

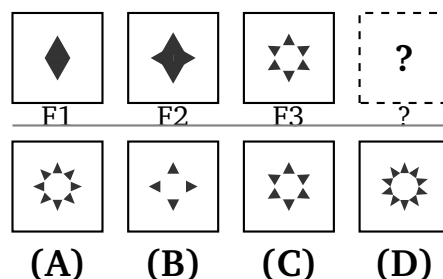
Answer: C.

Q5. Which figure should replace the question mark (?) in the series below?

**Answer: (D)****Solution**

The series alternates between a right-pointing arrow and a horizontal ellipse: arrow → ellipse → arrow → ?. After an arrow, the next shape is a horizontal ellipse. Option D shows a horizontal ellipse. **Answer: D.**

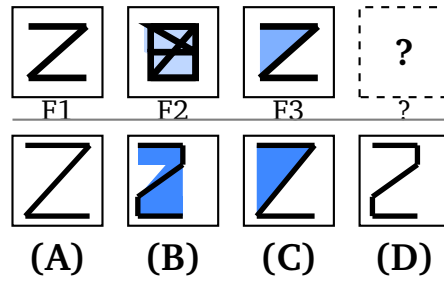
Q6. Which figure should replace the question mark (?) in the series below?

**Answer: (A)****Solution**

Small filled triangles arranged rotationally: **F1=2**, **F2=4**, **F3=6**, **?=8**. The count increases by 2 each step. Option A shows 8 triangles at 45° intervals. **Answer: A.**



Q7. Which figure should replace the question mark (?) in the series below?

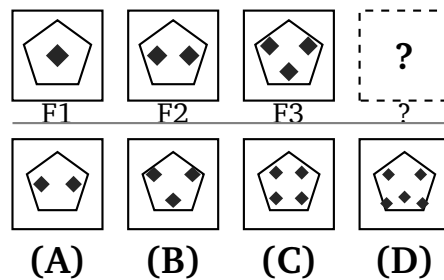


Answer: (B)

Solution

The Z-shape rotates 90° CW each step and progressively fills: **F1**=Z outline; **F2**=S-shape (Z rotated 90° CW), lightly filled; **F3**=Z at 180° , half-filled; **?**=S-shape rotated to 270° , fully filled. Option B shows the S-shape fully filled. **Answer: B.**

Q8. Which figure should replace the question mark (?) in the series below?

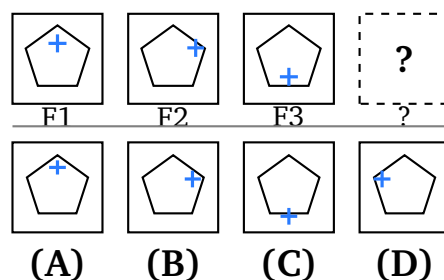


Answer: (C)

Solution

The number of filled diamonds inside the pentagon increases by 1 each step: **F1**=1, **F2**=2, **F3**=3, **?**=4. Option C shows a pentagon with 4 diamonds inside. **Answer: C.**

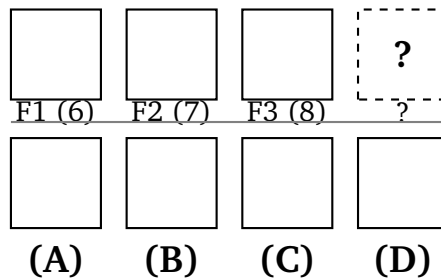
Q9. Which figure should replace the question mark (?) in the series below?



Answer: (D)**Solution**

A small cross moves clockwise inside the pentagon each step: **F1**=top, **F2**=right, **F3**=bottom, **?**=left. After the bottom position, moving clockwise leads to the left position. Option D shows the cross at the left. **Answer: D.**

Q10. Which figure should replace the question mark (?) in the series below?

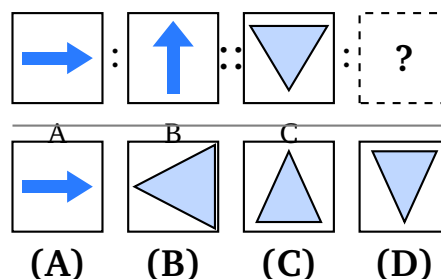
**Answer: (A)****Solution**

The number of sides increases by 1 each step: hexagon (6), heptagon (7), octagon (8), **?**=nonagon (9). Option A shows a regular 9-sided polygon (nonagon). **Answer: A.**

Section 2: Analogies (Q11 – Q17)

Directions: The first pair of figures (A:B) has a relationship. Apply the same relationship to figure C to find the missing figure (?).

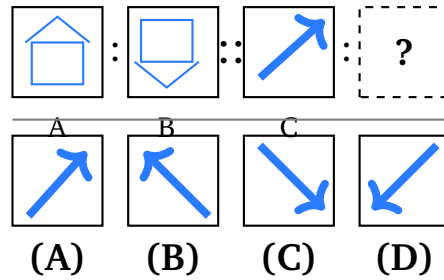
Q11. Figure A is to Figure B as Figure C is to (?).

**Answer: (B)**

Solution

Rule: the figure is rotated 90° counter-clockwise. A right-pointing arrow ($\rightarrow$) becomes an upward-pointing arrow ($\uparrow$) after 90° CCW. A downward-pointing triangle rotated 90° CCW becomes a triangle pointing to the left (apex at left). Option B shows the left-pointing triangle. **Answer: B.**

Q12. Figure A is to Figure B as Figure C is to (?).

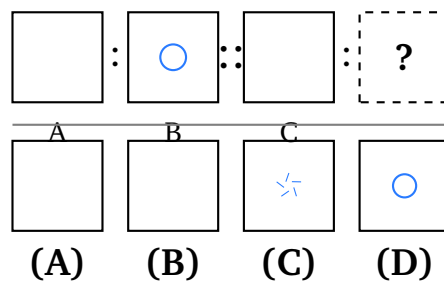


Answer: (C)

Solution

Rule: the figure is flipped top-to-bottom (vertical mirror). A house (square base + roof triangle pointing up) flipped top-to-bottom becomes an inverted house (triangle at bottom, square above). An NE-pointing arrow flipped top-to-bottom (the vertical mirror swaps top and bottom) becomes an SE-pointing arrow. Option C shows the SE arrow. **Answer: C.**

Q13. Figure A is to Figure B as Figure C is to (?).



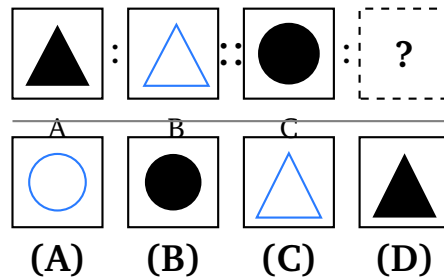
Answer: (D)



Solution

Rule: a small outline circle is added inside the shape. Pentagon $\rightarrow$ pentagon with inner circle. Octagon $\rightarrow$ octagon with inner circle. Option D shows an octagon with a small circle inside. **Answer: D.**

Q14. Figure A is to Figure B as Figure C is to (?).

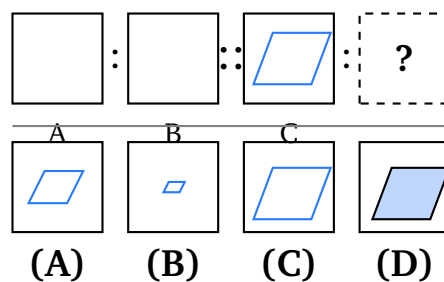


Answer: (A)

Solution

Rule: a solid filled black shape becomes an outline (unfilled) version of the same shape. Solid black triangle $\rightarrow$ outline triangle. Solid black circle $\rightarrow$ outline circle. Option A shows an outline circle. **Answer: A.**

Q15. Figure A is to Figure B as Figure C is to (?).



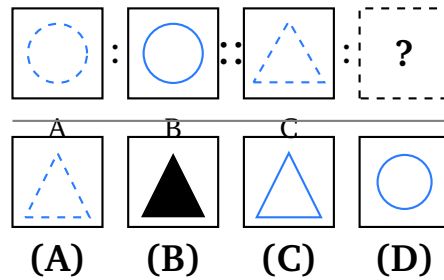
Answer: (B)

Solution

Rule: the shape is scaled down to approximately $\frac{1}{4}$ of its original size. A large hexagon shrinks to a very small hexagon. A large parallelogram shrinks to a very small parallelogram with the same proportions. Option B shows the very small parallelogram. **Answer: B.**



Q16. Figure A is to Figure B as Figure C is to (?).

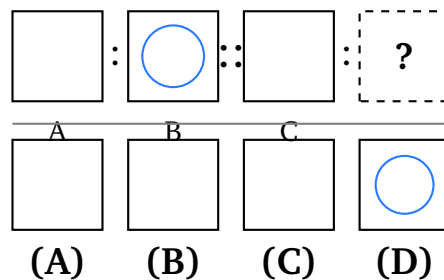


Answer: (C)

Solution

Rule: a dashed/dotted outline shape becomes the same shape drawn with a solid continuous outline. Dashed circle $\rightarrow$ solid-outline circle. Dashed triangle $\rightarrow$ solid-outline triangle. Option C shows the triangle with a solid outline. **Answer: C.**

Q17. Figure A is to Figure B as Figure C is to (?).



Answer: (D)

Solution

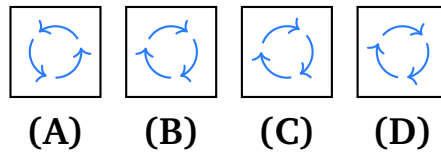
Rule: any angular polygon is replaced by a circle of similar area. Pentagon $\rightarrow$ circle. Heptagon $\rightarrow$ circle. Option D shows a circle. **Answer: D.**

Section 3: Odd One Out (Q18 – Q22)

Directions: Three of the four figures share a common property. Identify the figure that does NOT belong.

Q18. Which of the following figures does NOT belong with the others?



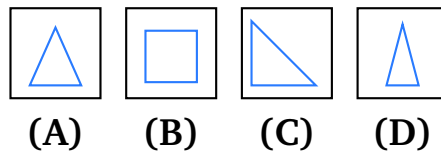


Answer: (A)

Solution

Figures B, C, and D all show three curved arrows arranged in a **clockwise** (CW) rotation pattern. Figure A shows three curved arrows arranged in a **counter-clockwise** (CCW) direction. Therefore A is the odd one out. **Answer: A.**

Q19. Which of the following figures does NOT belong with the others?

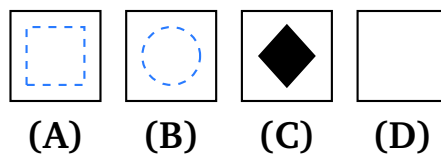


Answer: (B)

Solution

Figures A, C, and D are all triangles (three-sided polygons). Figure B is a square (four-sided polygon). Therefore B is the odd one out. **Answer: B.**

Q20. Which of the following figures does NOT belong with the others?



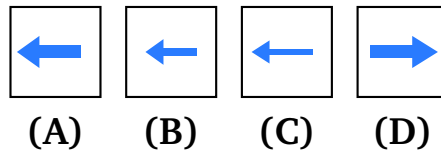
Answer: (C)

Solution

Figures A, B, and D all have dashed/dotted outlines with no fill. Figure C is a solid filled (completely black) diamond. Therefore C is the odd one out. **Answer: C.**

Q21. Which of the following figures does NOT belong with the others?



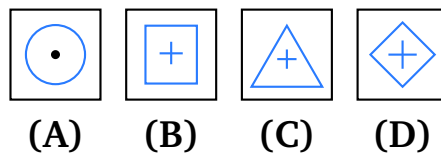


Answer: (D)

Solution

Figures A, B, and C all show arrows pointing to the **left**. Figure D shows an arrow pointing to the **right**. Therefore D is the odd one out. **Answer: D.**

Q22. Which of the following figures does NOT belong with the others?



Answer: (A)

Solution

Figures B, C, and D all show a shape containing a small **plus cross (+)** inside. Figure A shows a circle containing a small **filled dot** inside. Therefore A is the odd one out. **Answer: A.**

Section 4: Matrix (Q23 – Q24)

Directions: Study the 3×3 matrix of figures. Identify the figure that should replace the question mark (?).

Q23. Which figure should replace the question mark (?) in the matrix?



• •	• • •	• • • •
• • •	• • • •	• • • • •
• • • •	• • • • •	?
Col 1	Col 2	Col 3

• • • • •	• • • • •	• • • • • • •	• • • •
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(A) 5 dots (B) 6 dots (C) 7 dots (D) 4 dots

Answer: (B)

Solution

Rule: the number of dots in each cell equals the sum of its row number and column number.

Row 1: $(1+1) = 2$, $(1+2) = 3$, $(1+3) = 4$ Row 2: $(2+1) = 3$, $(2+2) = 4$, $(2+3) = 5$ Row 3: $(3+1) = 4$, $(3+2) = 5$, $(3+3) = 6$

The missing cell (Row 3, Col 3) should have **6 dots**. Option B shows 6 dots.

Answer: B.

Q24. Which figure should replace the question mark (?) in the matrix?

R1			
R2			
R3			?
	C1	C2	C3

(A)	(B)	(C)	(D)
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Answer: (C)



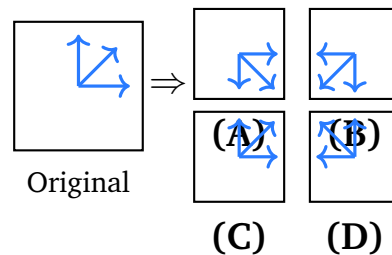
Solution

The matrix follows two rules: **Row** determines the shape (Row 1=diamond, Row 2=pentagon, Row 3=hexagon); **Column** determines the fill (Col 1=outline, Col 2=half-shaded, Col 3=solid filled). The missing cell is Row 3, Col 3 = solid-filled hexagon. Option C shows a solid-filled hexagon. **Answer: C.**

Section 5: Mirror Image (Q25)

Direction: Identify the correct mirror image (left-right reflection) of the given figure.

Q25. Which option shows the correct mirror image (left-right flip) of the figure shown?



Answer: (D)

Solution

The original figure has three arrows from a central point: ↑ (up), → (right), and NE (upper-right diagonal). A left-right mirror flip:

- The **up** arrow (↑) stays pointing up (vertical axis is unchanged by L-R flip).
- The **right** arrow (→) becomes a **left** arrow (←).
- The **NE diagonal** arrow becomes a **NW diagonal** arrow.

The mirrored figure has UP + LEFT + NW arrows (a fan in the upper-left quadrant). Option D matches this. **Answer: D.**



Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	D	2	A	3	B	4	C	5	D
6	A	7	B	8	C	9	D	10	A
11	B	12	C	13	D	14	A	15	B
16	C	17	D	18	A	19	B	20	C
21	D	22	A	23	B	24	C	25	D

Quick Answer Summary

Q1:D Q2:A Q3:B Q4:C Q5:D Q6:A Q7:B Q8:C Q9:D Q10:A
 Q11:B Q12:C Q13:D Q14:A Q15:B Q16:C Q17:D Q18:A Q19:B Q20:C
 Q21:D Q22:A Q23:B Q24:C Q25:D

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