VISUAL REASONING	LOGICAL DERIVATION	NUMERICAL ABILITY
	GENERAL KNOWLEDGE, ARCHITECTURE & DESIGN	
DESIGN THINKING	LANGUAGE INTERPRETATION	DESIGN SENSITIVITY

Find the total number of surfaces in the figure given below.
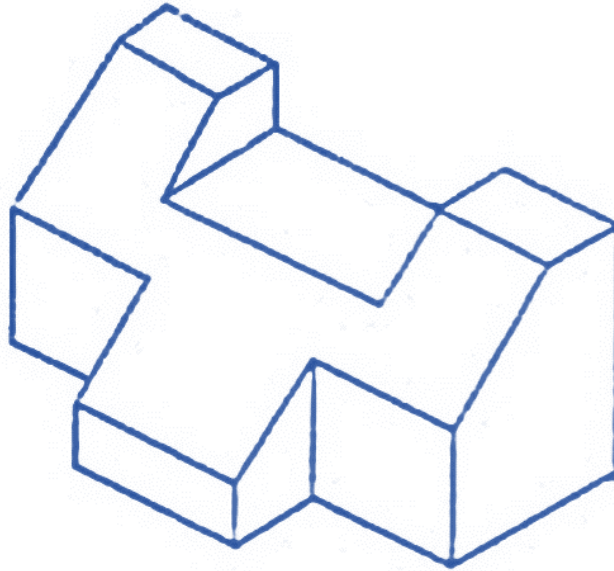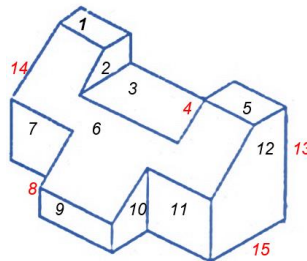

A. 13	B. 16
C. 15	D. 14

Answer key:

C. 15

Theory:

*Surfaces seen are named in black and the hidden ones are in red*

Suggested Reading: Basics of Orthographic projections
" For a swift review of the subject, kindly consult the study materials available on the website"

VISUAL REASONING	LOGICAL DERIVATION	NUMERICAL ABILITY
	GENERAL KNOWLEDGE, ARCHITECTURE & DESIGN	
DESIGN THINKING	LANGUAGE INTERPRETATION	DESIGN SENSITIVITY

Which basic element marks the intersection of two lines?
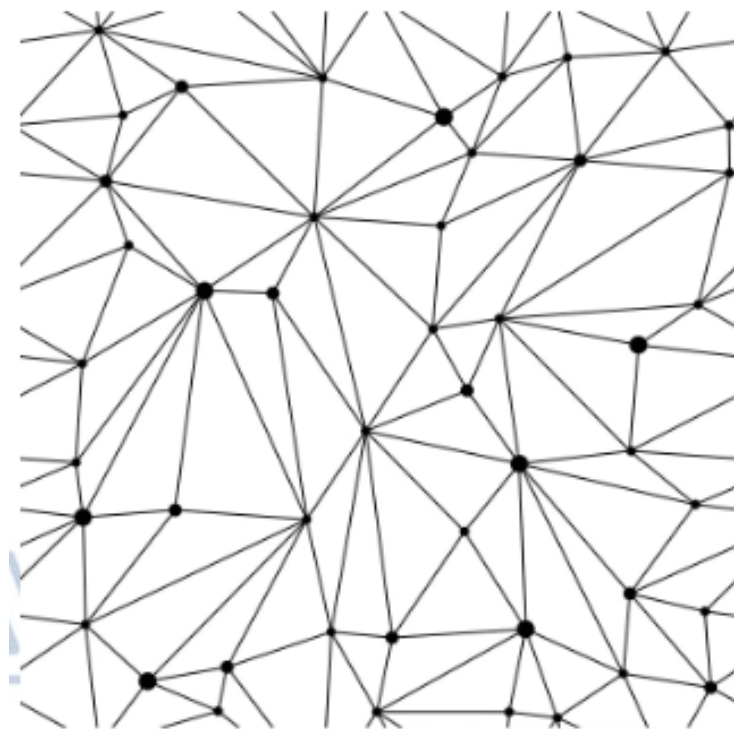
Source: Composition, Batch 2019, CAAD.

A. Point	B. Line
C. Form	D. Texture

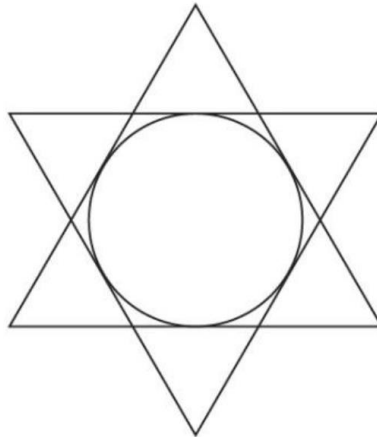| Answer key:	Theory:
A.Point	**Point** • Marks a position in space • Conceptually - no length, width or depth • Static, centralized & directionless. • Marks 2 ends of a line • Marks the intersection of two lines • Meeting of lines at corner of a plane or volume. • Marks the center of a field.

Suggested Reading: Elements of design
" For a swift review of the subject, kindly consult the study materials available on the website"

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CHENNAI ACADEMY OF ARCHITECTURE AND DESIGN

VISUAL REASONING	LOGICAL DERIVATION	NUMERICAL ABILITY
	GENERAL KNOWLEDGE, ARCHITECTURE & DESIGN	
DESIGN THINKING	LANGUAGE INTERPRETATION	DESIGN SENSITIVITY

The figure shows two concentric equilateral triangles with a circle within, such that the circle touches all the edges of the triangle. If the radius of the circle is √3, what is the total length of the star shaped outer border formed by the two intersecting triangles?

A. 36	B. 12
C. 48	D. 24

Answer key:

D. 24

Theory:

*AB is the radius of the circle, which is √**3** and ABC makes 30 degrees at the center (because ABC is 1/12th of the total circle)*
From triangle ABC,
$$\tan(30) = AC/AB = AC/\sqrt{3}$$
$$AC = \tan(30)*\sqrt{3} = \sqrt{3}/\sqrt{3} = 1$$
Since AC =1,
$$CD = 1 \times 2 = 2$$
Also,
CE=ED=DN=MN=LM=KL=JK=IJ=HI=GH=FG=CF =2
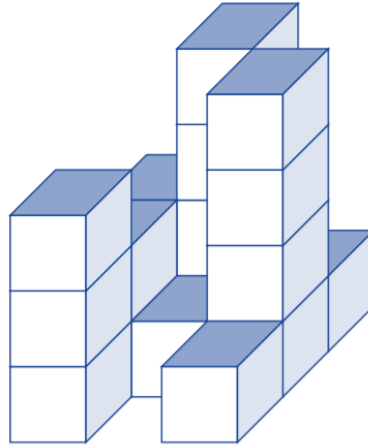*Total length of outer border = 12 x 2 = 24*

Suggested Reading: Geometry
" For a swift review of the subject, kindly consult the study materials available on the website"

VISUAL REASONING	LOGICAL DERIVATION	NUMERICAL ABILITY
	GENERAL KNOWLEDGE, ARCHITECTURE & DESIGN	
DESIGN THINKING	LANGUAGE INTERPRETATION	DESIGN SENSITIVITY

How many cubes are there in the given figure?

A. 16	B. 17
C. 18	D. 19

Answer key:

C. 18

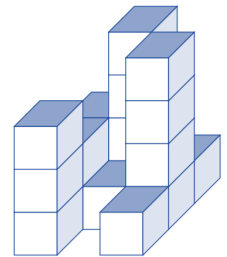**Theory:**

The base of the block is a 3X3 Square. To have 4 blocks vertically for each base square, the needed number of cubes are filled in the following table. Counting altogether we get the answer as 18

2	0	3
2	3	0
1	4	3

Suggested Reading: Geometry
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caad **CHENNAI ACADEMY OF ARCHITECTURE AND DESIGN**

VISUAL REASONING	LOGICAL DERIVATION	NUMERICAL ABILITY
GENERAL KNOWLEDGE, ARCHITECTURE & DESIGN		
DESIGN THINKING	LANGUAGE INTERPRETATION	DESIGN SENSITIVITY

Sewer pipes used in residential buildings are predominantly made of_____.
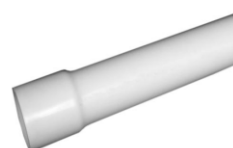
A. PVC	B. Fiber glass
C. Copper	D. All of the above

Answer key:

A. PVC

Theory:

Polyvinyl Chloride (PVC) pipes are the most common type of sewer line pipes today. Plastic pipework is lightweight, durable, easy to use, and resilient. When installed properly, PVC pipe is long-lasting and lower the maintenance cost.

Suggested Reading: Basics of building materials
" For a swift review of the subject, kindly consult the study materials available on the website"

VISUAL REASONING	LOGICAL DERIVATION	NUMERICAL ABILITY
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DESIGN THINKING	LANGUAGE INTERPRETATION	DESIGN SENSITIVITY

Identify the art movement behind this painting

Source: https://www.artalistic.com/en/blog/what-is-pop-art/

A. Bauhas	C. De Stijl
B. Pop art	D. Cubism

Answer key:

B. Pop art

Theory:

Pop art is an art movement that emerged in the United Kingdom and the United States during the mid- to late-1950s. The movement presented a challenge to traditions of fine art by including imagery from popular and mass culture, such as advertising, comic books and mundane mass-produced objects.

Suggested Reading: Art Movement
" For a swift review of the subject, kindly consult the study materials available on the website"

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CHENNAI ACADEMY OF ARCHITECTURE AND DESIGN

VISUAL REASONING	LOGICAL DERIVATION	NUMERICAL ABILITY

| GENERAL KNOWLEDGE, ARCHITECTURE & DESIGN |

| DESIGN THINKING | LANGUAGE INTERPRETATION | DESIGN SENSITIVITY |

What role does lateral thinking play in problem-solving?

A. It restricts the exploration of alternative solutions

B. It encourages the exploration of diverse perspectives

C. It relies solely on analytical thinking

D. It follows a predetermined path

Answer key:

B. It encourages the exploration of diverse perspectives

Theory:

Lateral thinking encourages the exploration of diverse perspectives in problem-solving by prompting individuals to consider unconventional or unexpected approaches to challenges. Instead of following a linear or predetermined path, lateral thinking encourages individuals to break away from traditional modes of thinking and explore new angles, ideas, and solutions. By fostering creativity and openness to different viewpoints, lateral thinking expands the range of possibilities and enhances the likelihood of identifying innovative solutions to complex problems.

Suggested Reading: Design Thinking
" For a swift review of the subject, kindly consult the study materials available on the website"

VISUAL REASONING	LOGICAL DERIVATION	NUMERICAL ABILITY

GENERAL KNOWLEDGE, ARCHITECTURE & DESIGN

DESIGN THINKING	**LANGUAGE INTERPRETATION**	DESIGN SENSITIVITY

A part of the sentence is _italicised and underlined_. Below are given alternatives to the italicised part which may improve the sentence. Choose the correct alternative. In case no improvement is needed, option 'D' is the answer.

When the examinations were over _Anil and me_ went to our native town

A. me and Anil	C. I and Anil
B. Anil and I	D. No improvement

Answer key:

B. Anil and I

Theory:

**I** should be used instead of **me** as the pronoun here is the subject of the verb. Me is used when the pronoun is the object of the verb. And I is used after Anil for prioritising the named person.

VISUAL REASONING	LOGICAL DERIVATION	NUMERICAL ABILITY

GENERAL KNOWLEDGE, ARCHITECTURE & DESIGN

DESIGN THINKING	**LANGUAGE INTERPRETATION**	DESIGN SENSITIVITY

All owls have night vision, and birds that have night vision aren't black. Which of the following statements must be true?

A. Black ravens don't have night vision.
B. All owls are not black.
C. Birds that are black lack night vision.
D. All of the above.

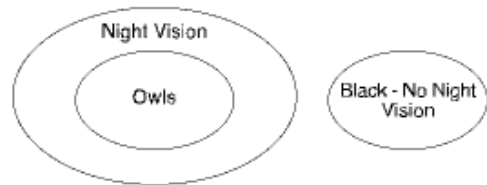| A. Black ravens don't have night vision.	C. Birds that are black lack night vision.
B. All owls are not black	D. All of the above

Answer key:

D. All of the above

Theory:

D: *The illustration shows that black ravens don't have night vision, all owls aren't black and finally that black birds lack night vision. All of the statements are true.*
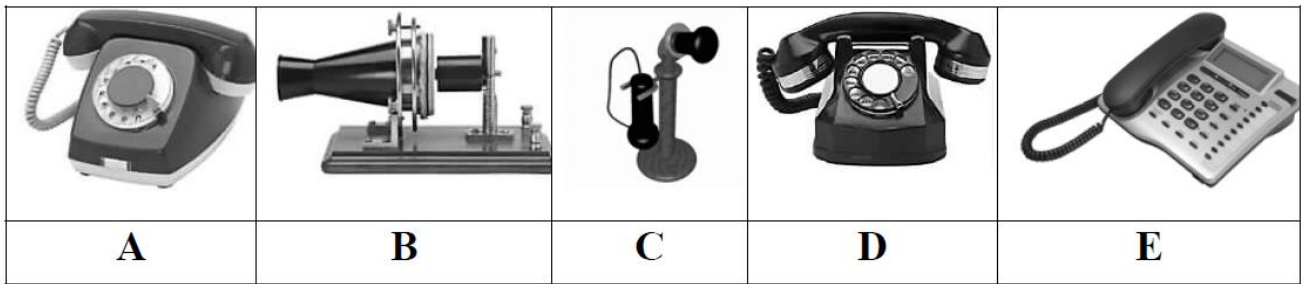

Suggested Reading: Syllogism
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Below are 5 images of Telephones that were used across different time periods, placed in a random order. Select the correct sequence of the telephones according to the time scale, from past to present, from the options given below.

A	B	C	D	E

A. BCAED	C. BCDAE
B. CBADE	D. CBDAE

Answer key:

C. BCDAE

Theory:

B – Bell's Centennial Model 1876
C – Desk Set 1910
D – 300 TYPE DESK SET 1937
A- 500 TYPE COLOR DESK SET, 1954
E – TOUCH TONE, 1962

Suggested Reading: Evolution of Design
" For a swift review of the subject, kindly consult the study materials available on the website"