

<p>JEE (Adv) 2020 (AAT)</p> <p>Time: 3 hours Maximum Marks: 300</p> <p style="text-align: center;">READ THE INSTRUCTIONS CAREFULLY</p> <p>GENERAL</p> <ul style="list-style-type: none"> • This sealed booklet is your Question Paper. Do not break the seal till you are told to do so. • Immediately after breaking the seal of the booklet, verify that the booklet contains 28 pages and that all the 16 questions along with the options are legible. Report immediately about any missing or torn sheet in this booklet and ask for a replacement of the booklet from the invigilator. No replacement will be allowed after 15 minutes of the starting of the examination. • Write your Name, Roll Number, JEE (Adv) 2020 Rank and other details in the space provided and nowhere else. No distinctive / identification mark of any type is to be put anywhere else in this booklet. • Answers are to be written only in the booklet and within the space provided beside / below each Question and nowhere else. Answers written in non-designated place will not be evaluated. • Blank spaces are provided within this booklet for rough work. • Do not deface this booklet or detach or mutilate any sheet from the booklet. Such acts lead to disqualification. • The question paper has five sections. • All the Questions are compulsory. <p>Total Marks Obtained:</p> <p>In Numbers: <input style="width: 100px; height: 30px;" type="text"/></p> <p>In words: _____</p> <p>_____ Signature of the Examiner with date</p> <p>_____ Signature of the Scrutinizer with date</p>	<p>JEE (Adv) 2020 (AAT)</p> <p>NAME: _____</p> <p>_____</p> <p>ROLL NO: _____</p> <p>JEE (ADV) 2020 RANK: _____</p> <p>CATEGORY: _____</p> <p>CATEGORY RANK (IF APPLICABLE):</p> <p>_____</p> <p>EXAMINATION CENTRE:</p> <p>_____</p> <p>I HAVE READ ALL THE INSTRUCTIONS AND SHALL ABIDE BY THEM</p> <p>_____ Signature of the Candidate</p> <p>_____ Signature of the Invigilator after verification of identity and other details</p>
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SEAL

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SECTION A: Architectural Awareness (Maximum Marks: 60)

This section contains **FOUR** questions. Question 1 carries **30 marks**, Questions 2, 3 and 4 carry **10 marks** each. There is **NO** negative marking.

Q.1. This section contains **15 multiple choice questions**. Each question has four options, out of which **ONLY ONE** is correct. Mark the correct option with a tick mark.

(15 x 2 = 30 Marks)

(i) The architectural marvel 'Taj Mahal' at Agra is a

Museum

Fort

Mausoleum

Palace

(ii) Which among the following materials possesses similar binding property as cement?

Lime

Brick

Sand

Gravel

(iii) Ratio of two consecutive higher order terms in Fibonacci Sequence, approaches an irrational number which is known as

Golden Ratio

Pi

Euler's number

Pythagoras' constant

(iv) An Indian architect, who won the Pritzker Architecture Prize in the year 2018 is

Hafeez Contractor

Raj Rewal

B V Doshi

Charles Correa

(v) Which among the following is identical to 'Figure X'?

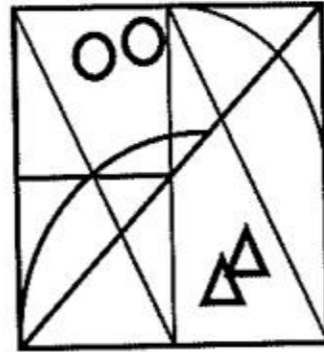
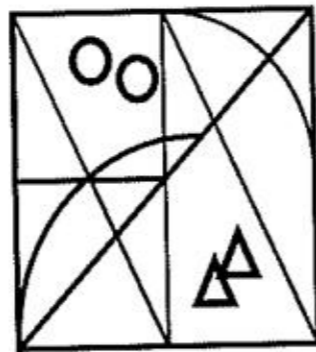
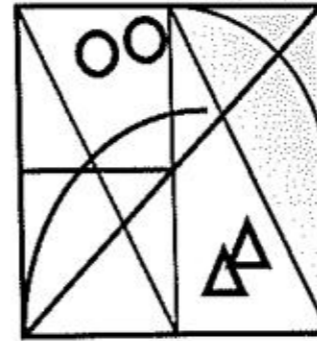
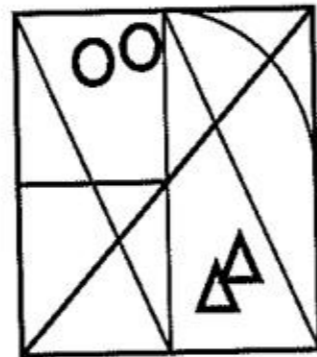
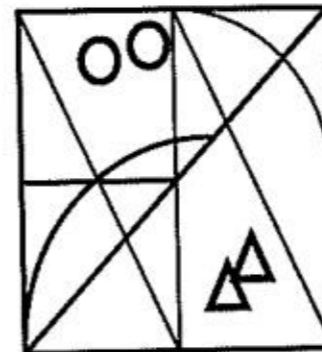


Figure X

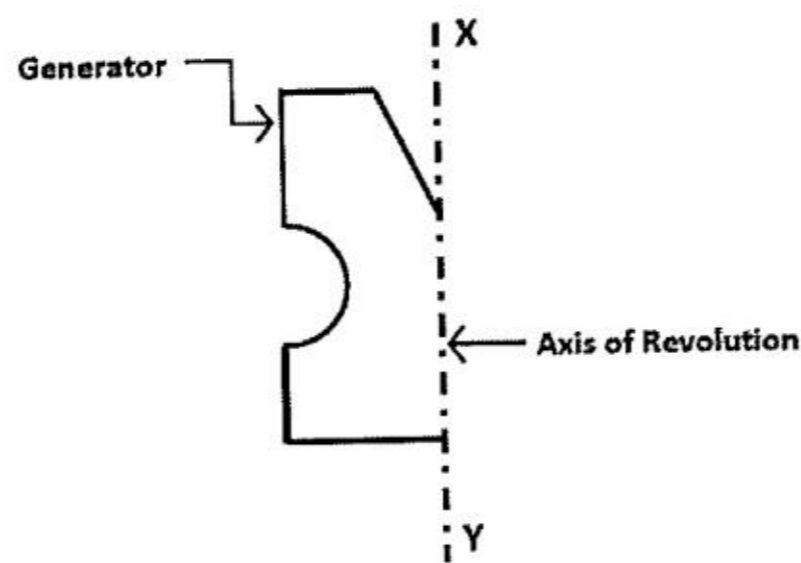








(vi) The number of curved surfaces obtained by rotating the generator (as shown in the figure below) about its axis of revolution X-Y, is


 2

 3

 4

 6

(vii) One hectare equals to

10,000 sq.mt.

100,000 sq.mt.

1,000 sq.mt.

100 sq.mt..

(viii) Which of the following architectural master piece in India features in the UNESCO world heritage list?

Lotus Temple, New Delhi by Fariborz Sahba

The Complexe du Capitole, Chandigarh by Le Corbusier

Jawahar Kala Kendra, Jaipur by Charles Correa

Matrimandir - Auroville, Puducherry by Roger Anger

(ix) Escalator is used in public buildings for

Vertical circulation

Horizontal circulation

Fire protection

Beautification

(x) Which among the following is **NOT** a type of air-conditioner?

Window

Split

Cassette

Disc

(xi) Sloped roof **DOES NOT** protect the building from

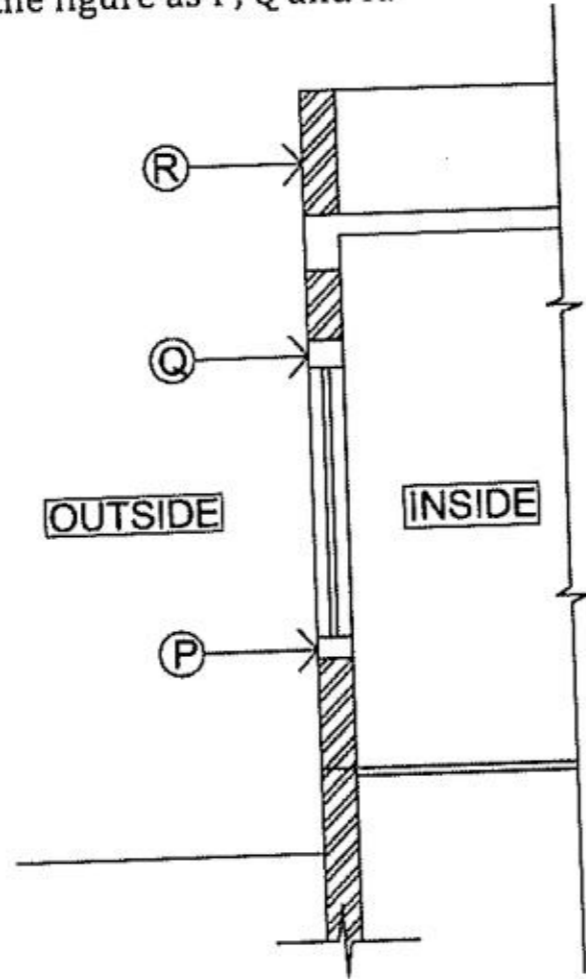
Heavy rain

Snow fall

Hail storm

Earthquake

(xii) A building wall section is presented in the figure below. Identify the building elements marked in the figure as P, Q and R.

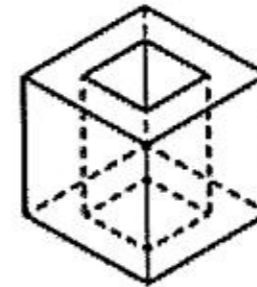
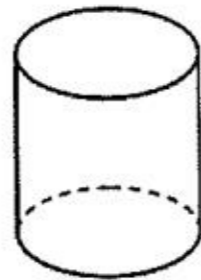
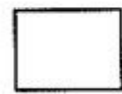
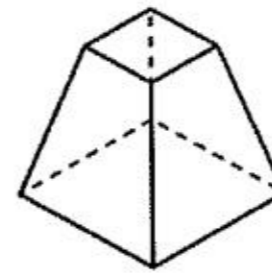
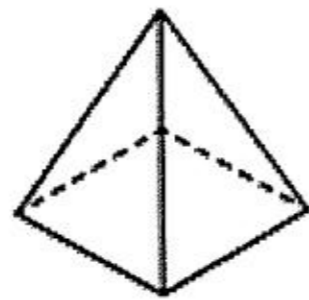
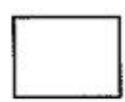
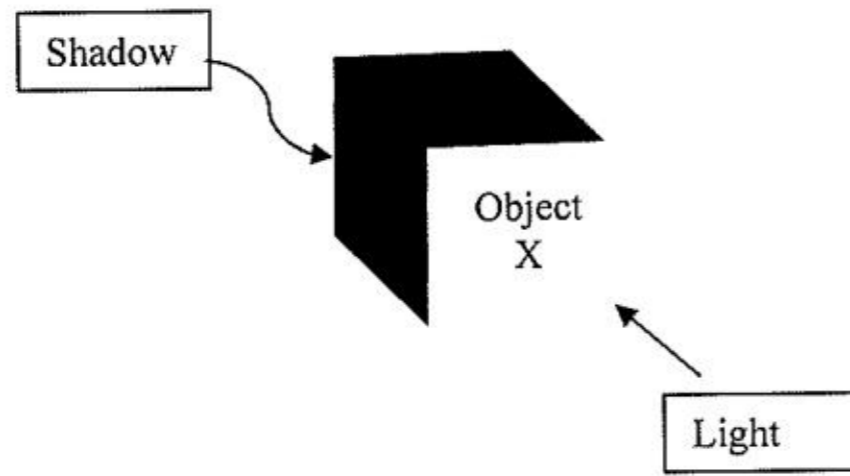


- (P) Lintel (Q) Sill (R) Parapet
- (P) Sill (Q) Lintel (R) Parapet
- (P) Parapet (Q) Lintel (R) Sill
- (P) Sill (Q) Parapet (R) Lintel

(xiii) The World Habitat Day is celebrated every year on

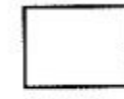
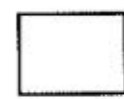
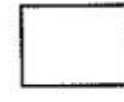
- First Monday of October
- Second Monday of October
- First Monday of November
- Second Monday of November

(xiv) An object-X and its shadow against the light direction are shown as top view. Identify the object -X from the options given below.








(xv) Identify the appropriate pattern following the sequence

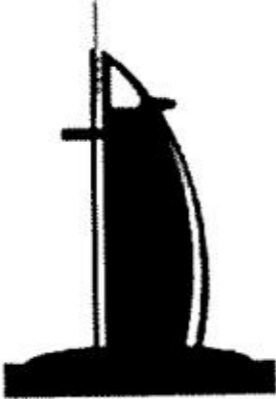




P) Q) R) S) ___?___



Q.2 Match the logo in **Column I** with the respective Government of India mission/ scheme in **Column II** (5 x 2 = 10 Marks)

Column I	Column II
(A)  <input type="checkbox"/>	(P) Smart City
(B)  <input type="checkbox"/>	(Q) Digital India
(C)  <input type="checkbox"/>	(R) National Higher Education Mission
(D)  <input type="checkbox"/>	(S) Skill India
(E)  <input type="checkbox"/>	(T) Mid-day meal
	(U) Make in India

Q.3 Match the silhouette of the building in **Column I** with its respective location in **Column II**
 (5 x 2 = 10 Marks)

Column I	Column II
(A)  <input type="checkbox"/>	(P) Hyderabad
(B)  <input type="checkbox"/>	(Q) Kuala Lumpur
(C)  <input type="checkbox"/>	(R) Dubai
(D)  <input type="checkbox"/>	(S) Moscow
(E)  <input type="checkbox"/>	(T) Abu Dhabi
	(U) New Delhi

Q.4 Match the following cities listed in **Column I** and their popular name in **Column II**
(5 x 2 = 10 Marks)

Column I	Column II
(A) Jaipur <input type="checkbox"/>	(P) Steel city
(B) Bangalore <input type="checkbox"/>	(Q) Manchester of India
(C) Surat <input type="checkbox"/>	(R) Pink City
(D) Jamshedpur <input type="checkbox"/>	(S) Garden City
(E) Ahmedabad <input type="checkbox"/>	(T) Blue City
	(U) Diamond city

SECTION B: Geometrical Drawing (Maximum Marks: 60)
 This section contains **THREE (03)** questions. Each question carries **20** marks

Q.5 Jalis are used in historic and contemporary buildings to ensure natural light and ventilation. Figure X below shows an example of such Jali. The basic component of Jali is its geometrical configuration. Complete the Jali design in the box below.

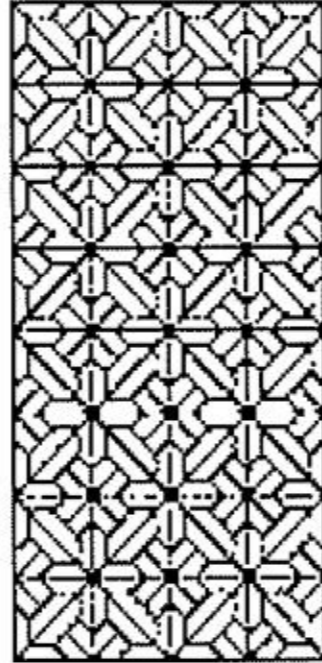
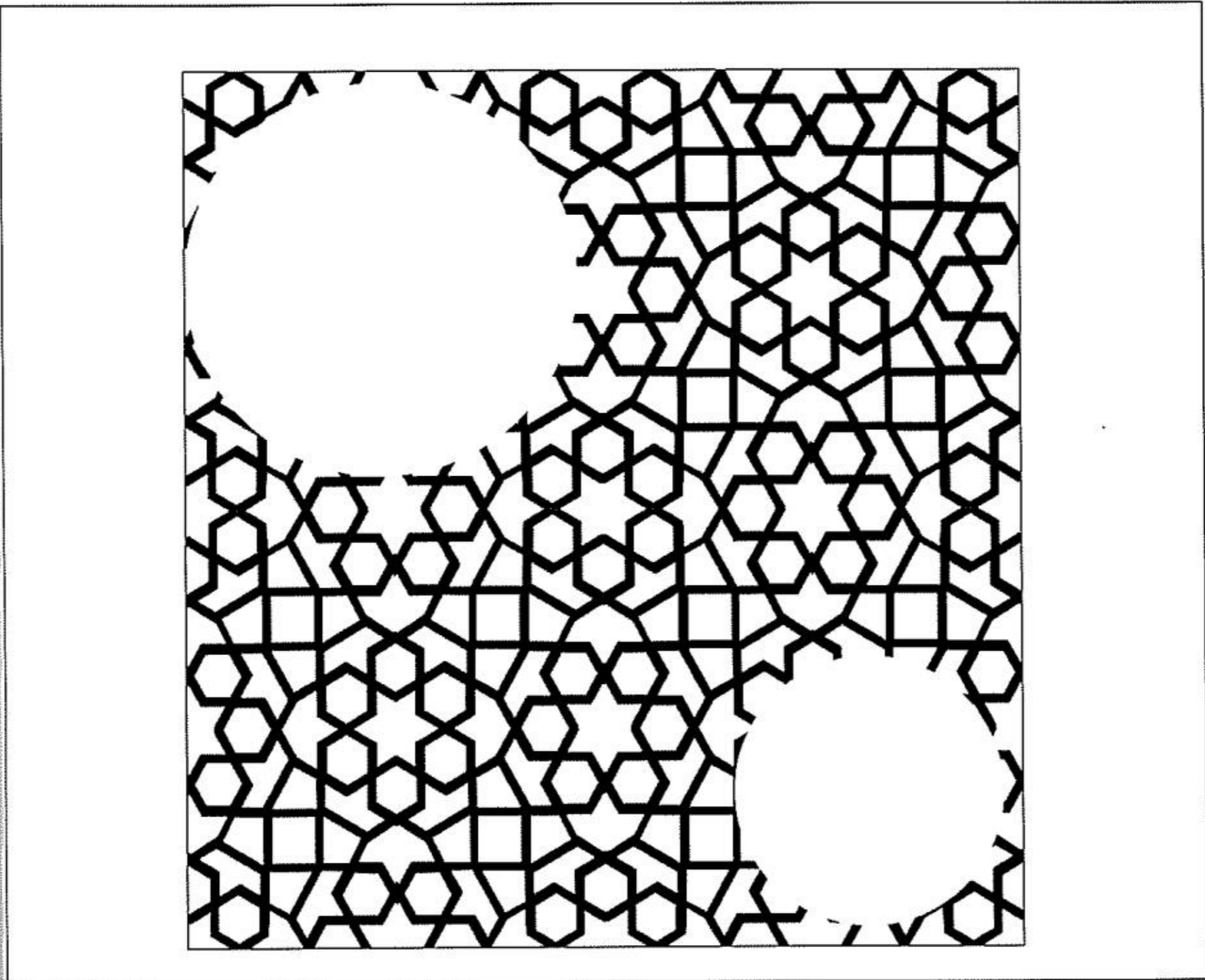
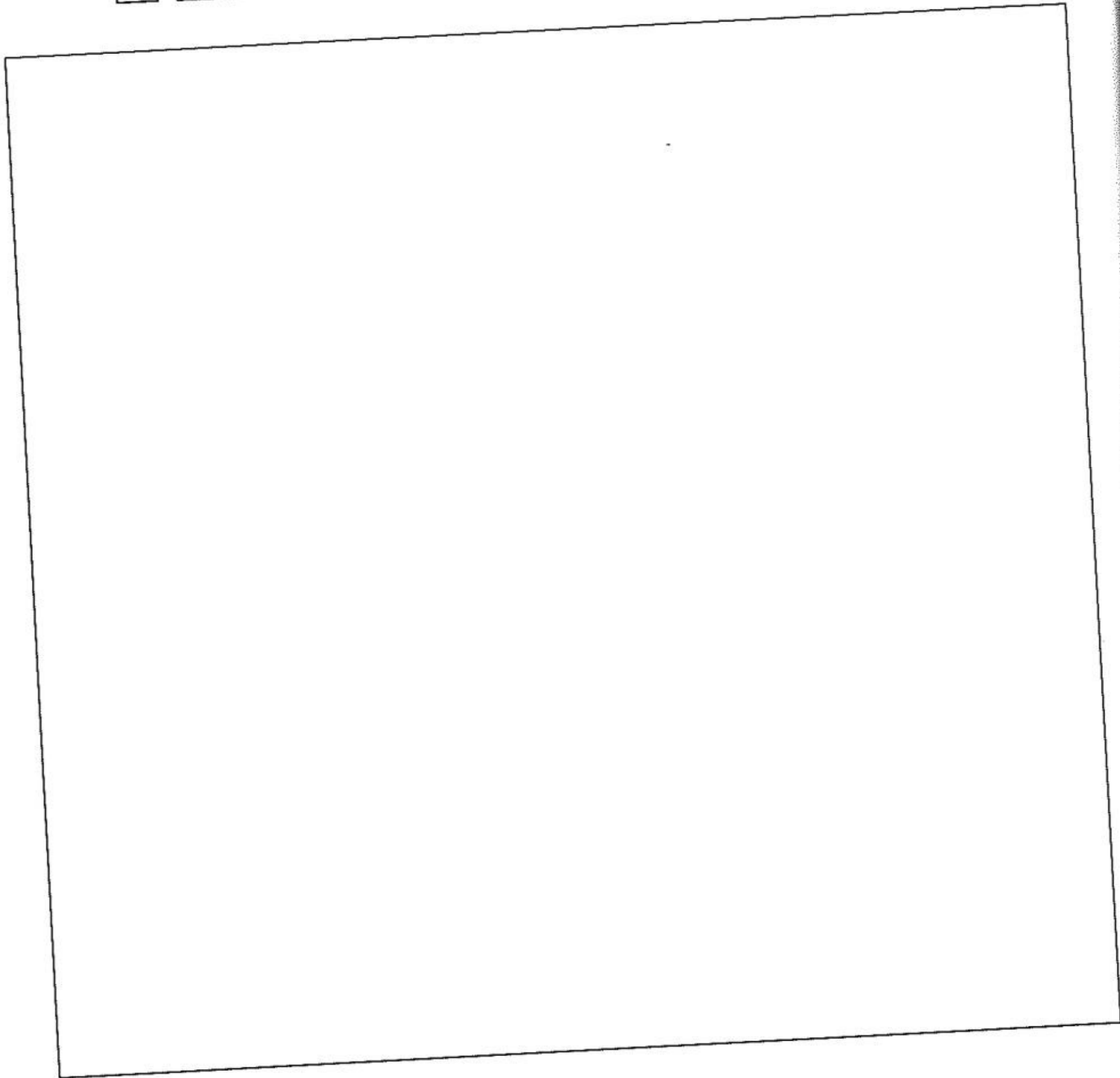
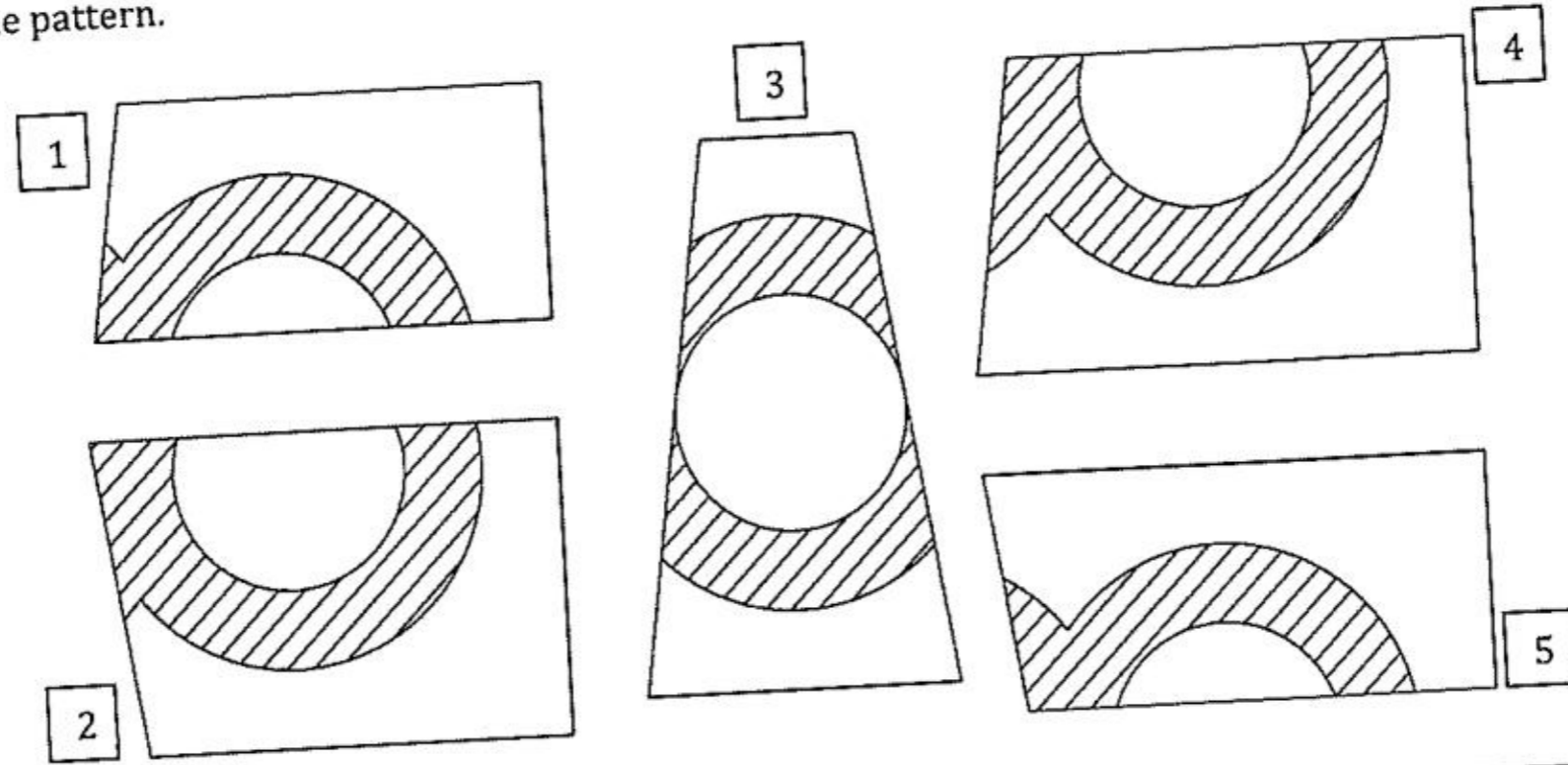


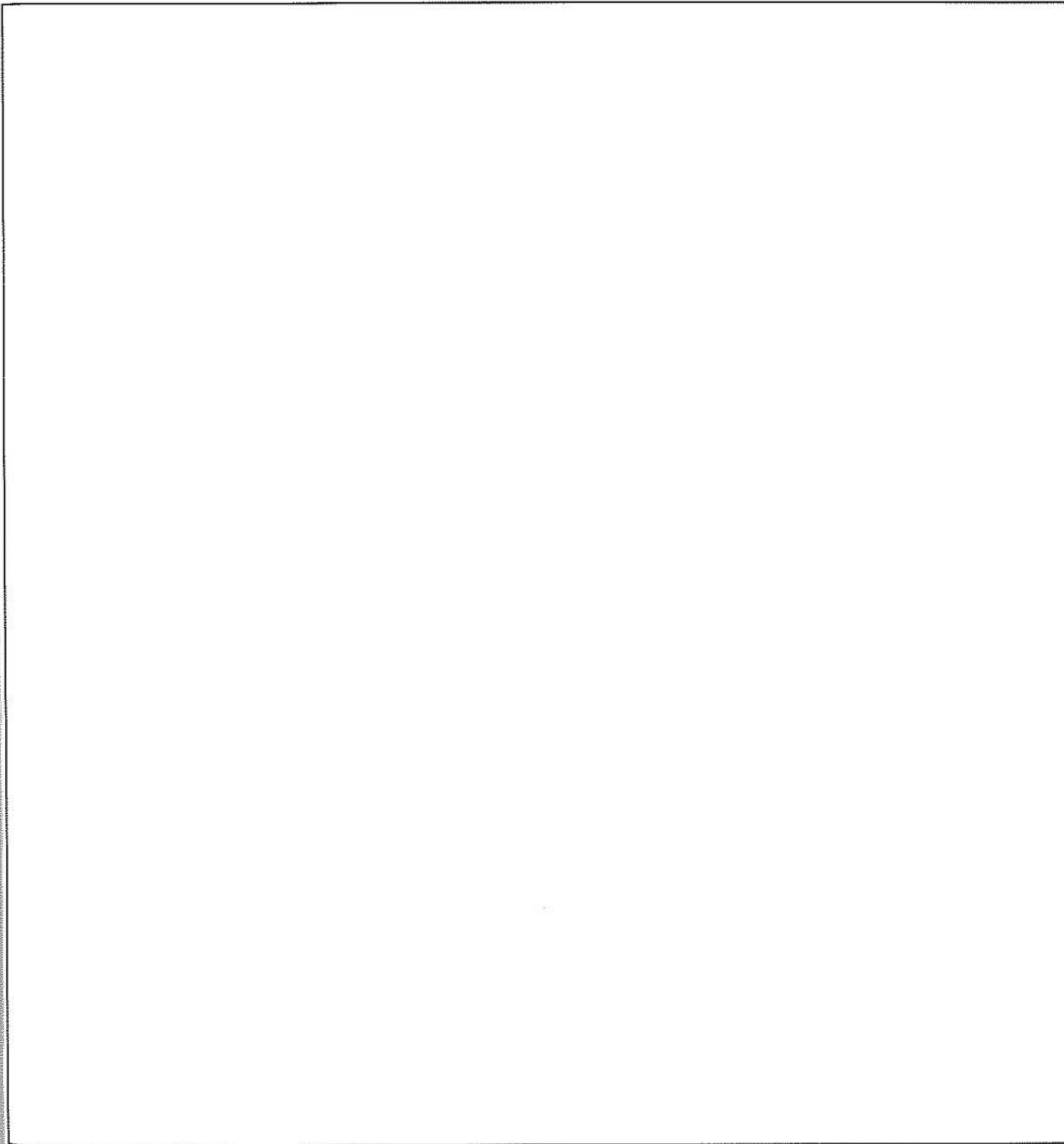
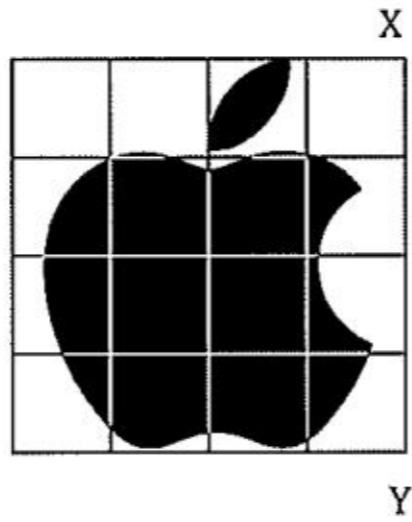
Figure X



Q.6 Rearrange the following five pieces of paper to form a rectangle in such a way that it completes the pattern.

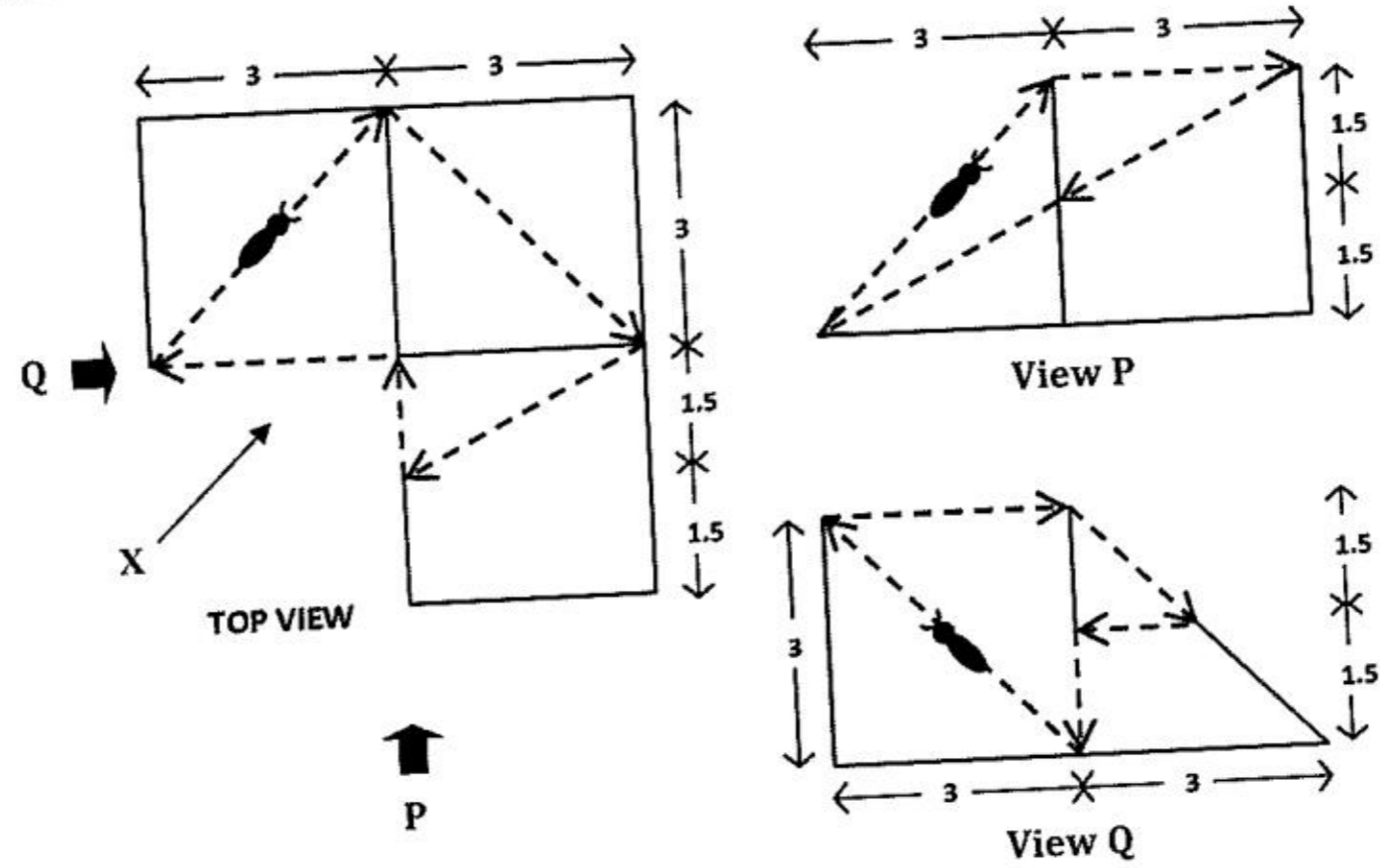


Q.7 Enlarge the following figure three times after flipping about the line XY, in the space provided below.

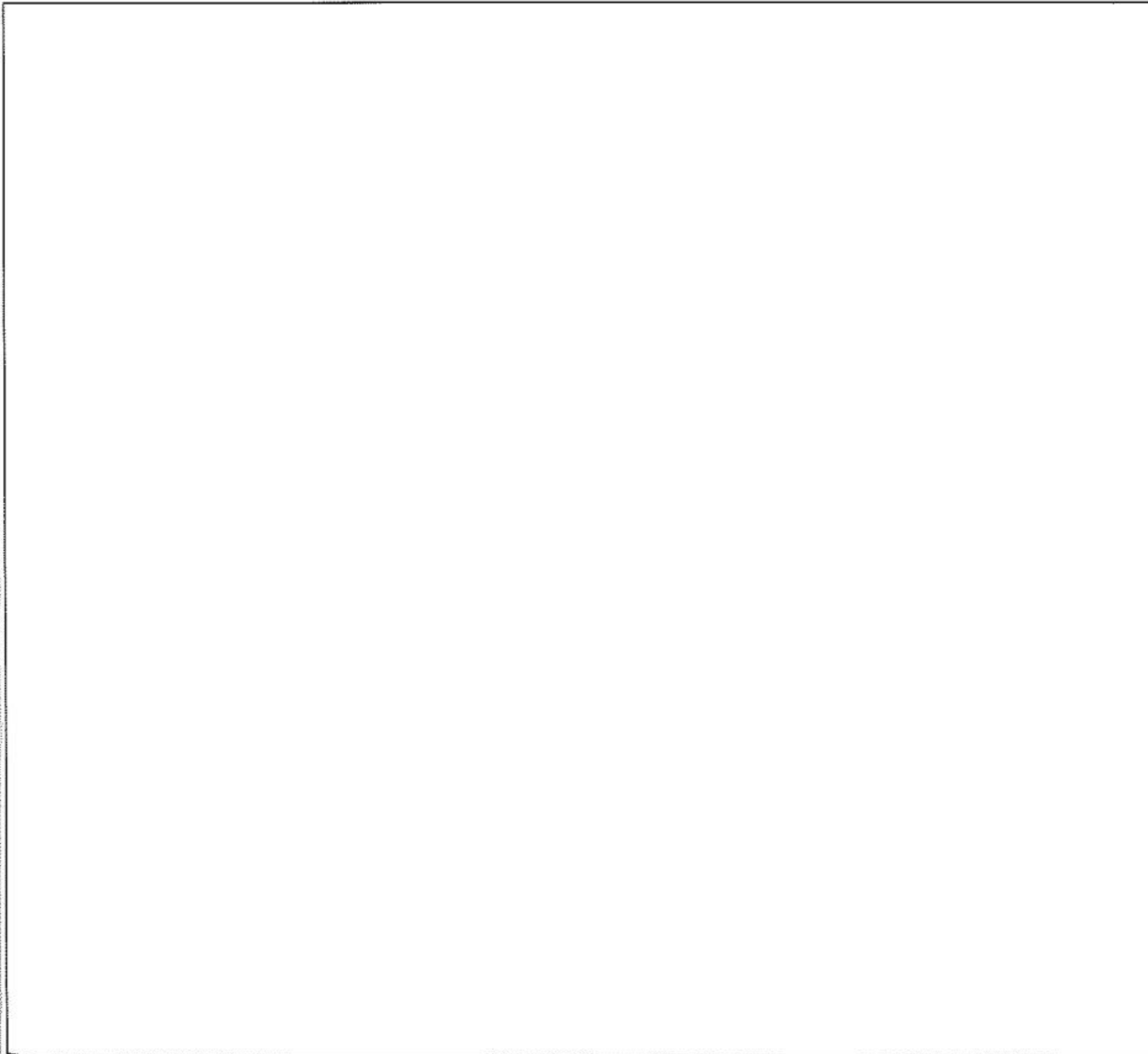
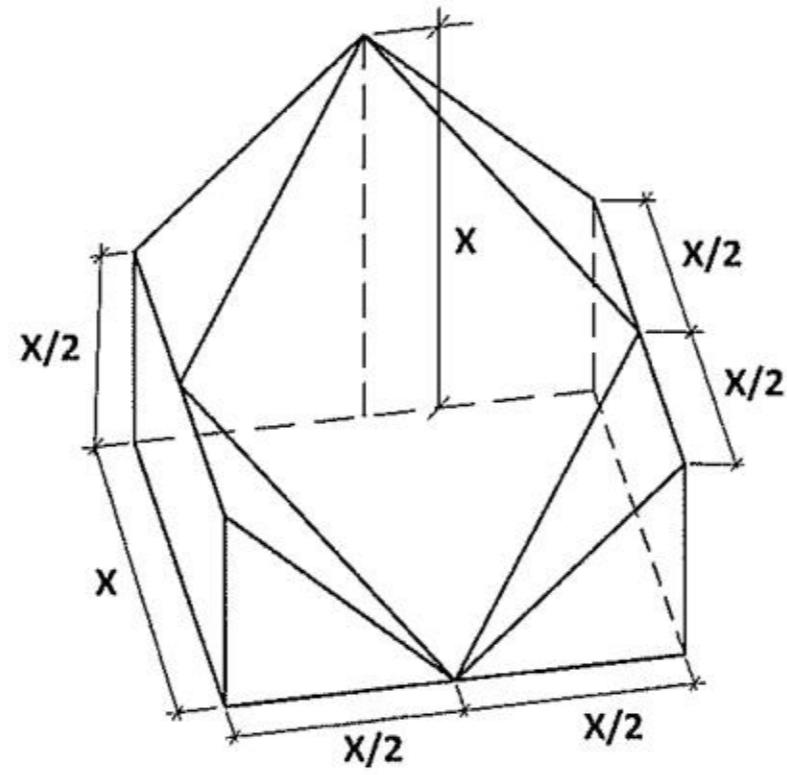


SECTION C: 3D Perception (Maximum Marks: 60)
 This section contains **THREE (03)** questions. Each question carries 20 marks

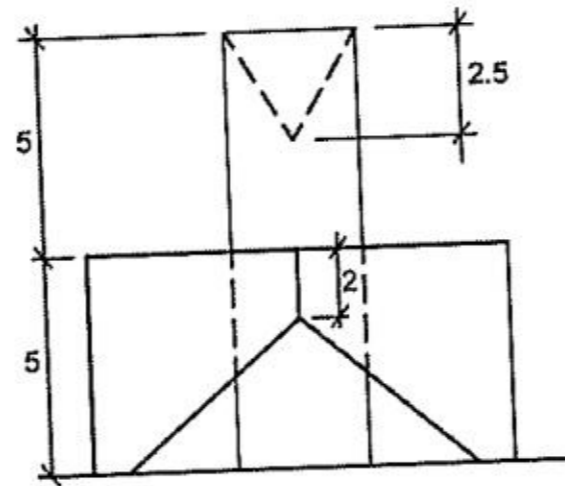
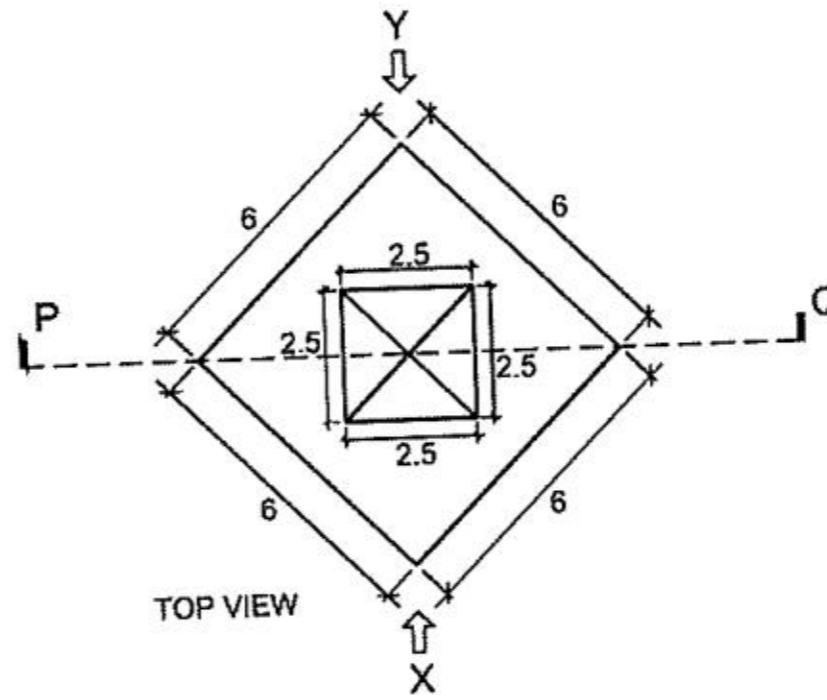
Q.8 The top view, and view from P and Q of a three-dimensional object are given below. The dashed line with the arrows indicates the path of an ant over the surface of the object. Develop the three dimensional isometric view from 'X' direction of the object and trace the path of the ant. All dimensions are in centimeter.



Q.9 Draw the top view of the Kdron whose 3D angular front view with dimensions is shown below



Q.10 The top view and the elevation from 'X' direction of objects are given below. The object is identical both from 'X' and 'Y' direction. Draw the sectional view of the object when cut through PQ.

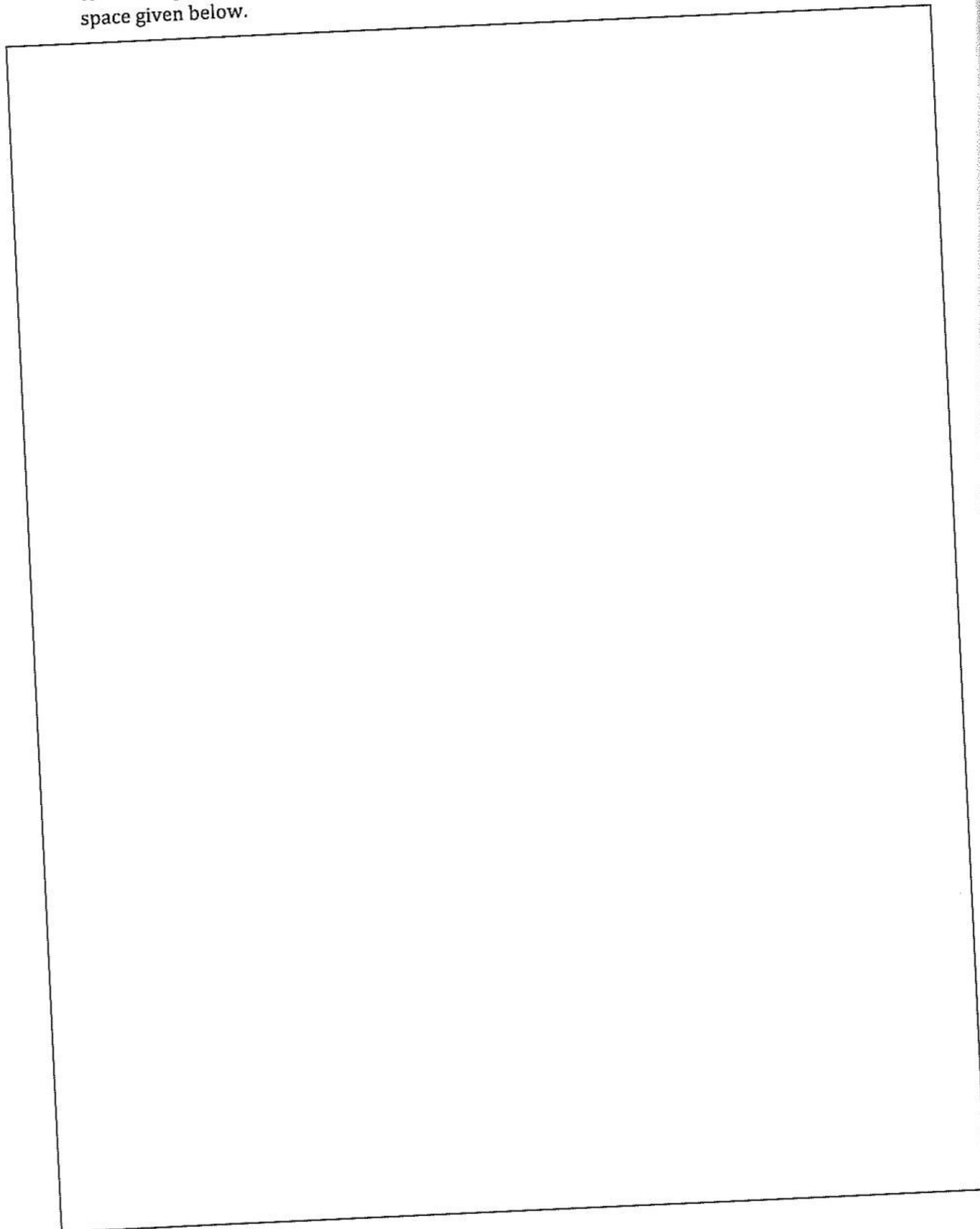


SECTION D: Imagination and Aesthetic Sensitivity (Maximum Marks: 60)
This section contains **THREE (03)** questions. Each question carries **20** marks

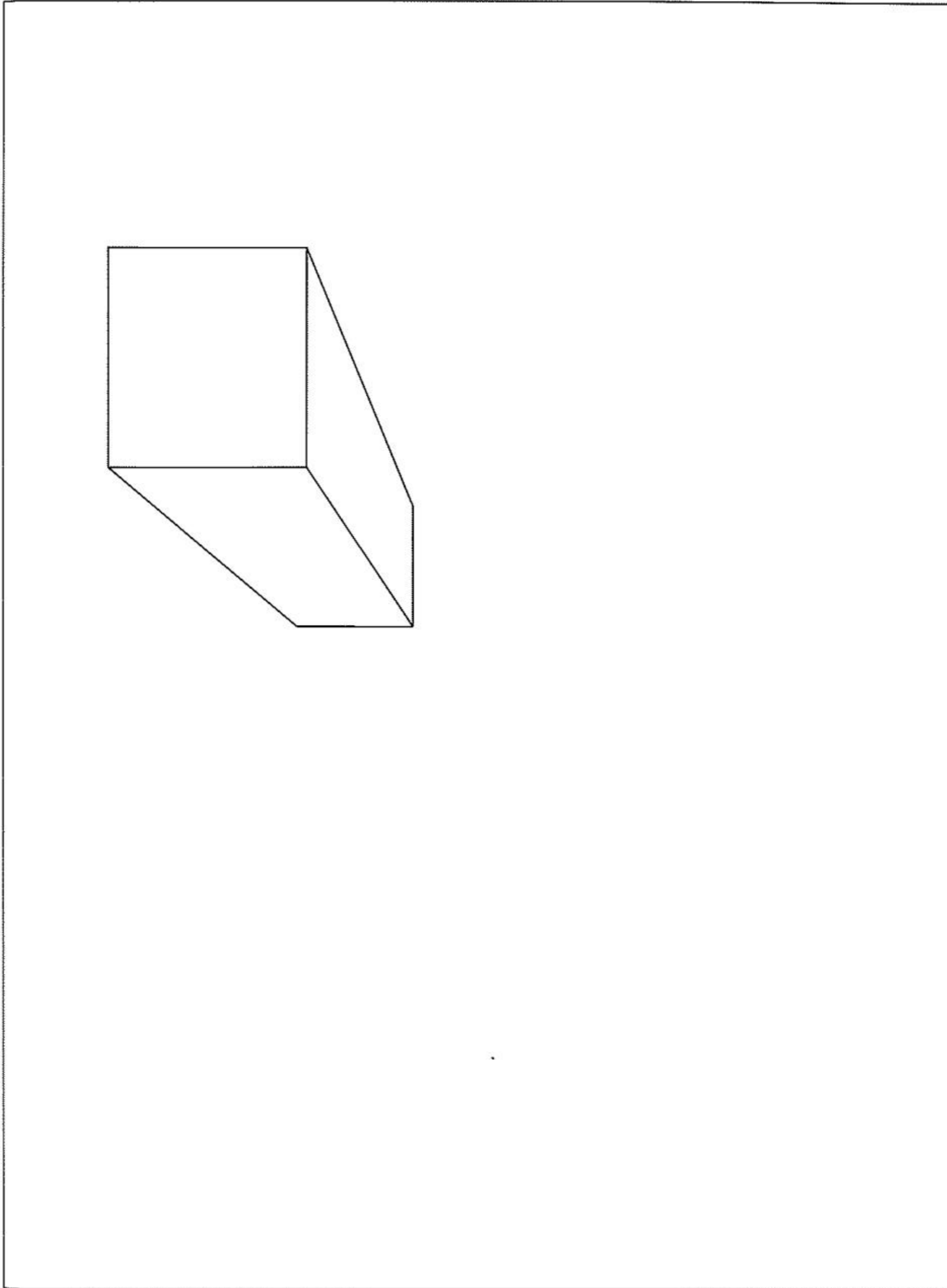
- Q.11 Air, water, sun, trees constitute the natural environment which interact with building to create built environment for good living. However, often we are ignorant of the environment and forget to value them. Therefore Water, Tree and Building are worried about this ignorance. Make an imaginary conversation between Water, Tree and Building about their concerns and add a concluding remark in the space provided below

Building
Water/Tree
Tree/Water
Building
Tree/Water
Water/Tree
Concluding remark

- Q.12 Segregating domestic waste into bio-degradable and non-bio degradable components at home is one of the goal in **Swachh Bharat Mission** because **segregation at source** leads to effective waste collection and its management. In order to sensitise citizens, municipal authority wishes to make a poster campaign about this. Design a coloured poster to convey the message in the space given below.



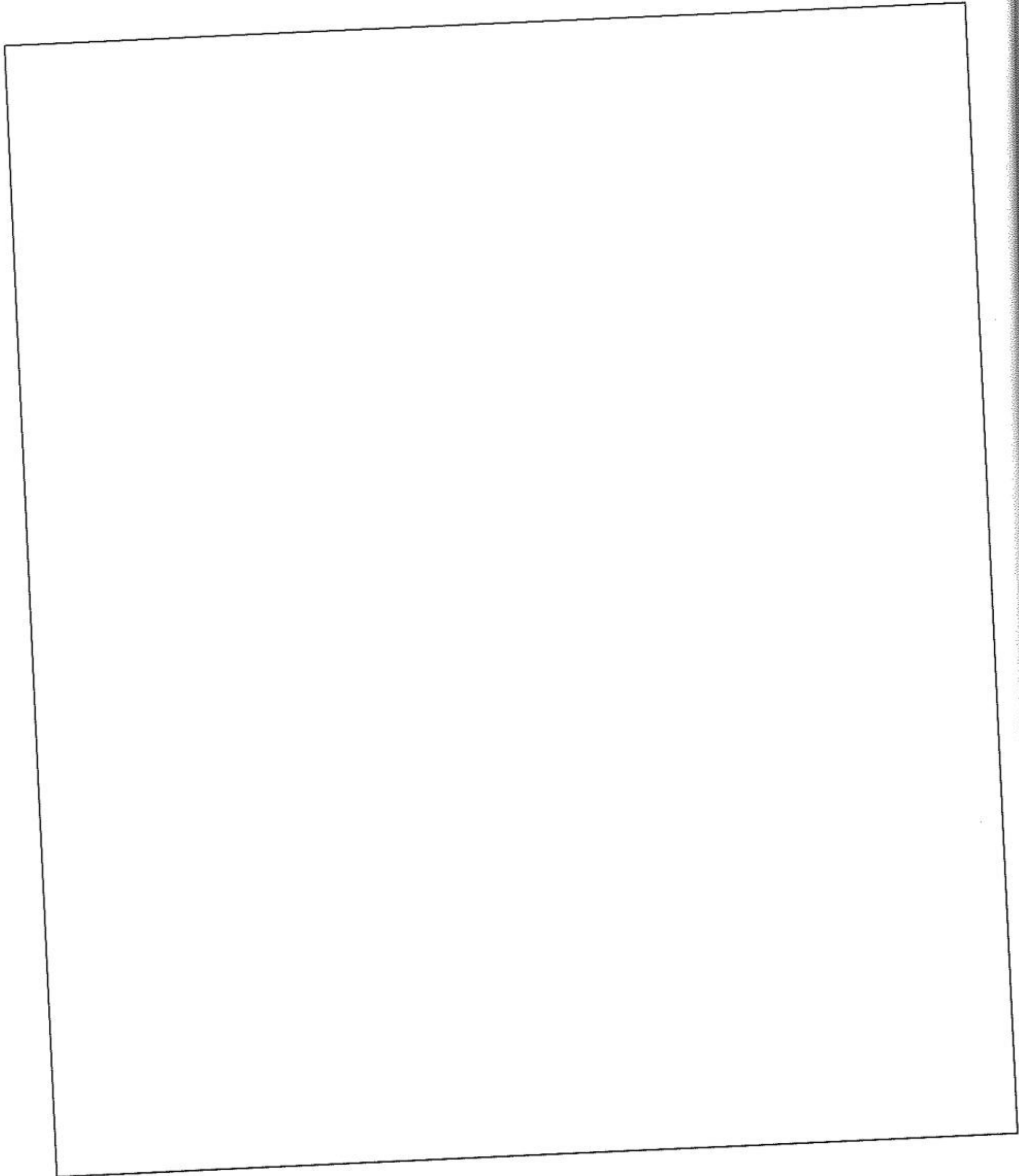
Q.13 Develop the bird's eye view of a city with the associated elements, using the partial figure and colour it appropriately.



SECTION E: Freehand Drawing (Maximum Marks: 60)

This section contains **THREE (03)** questions. Each question carries **20** marks

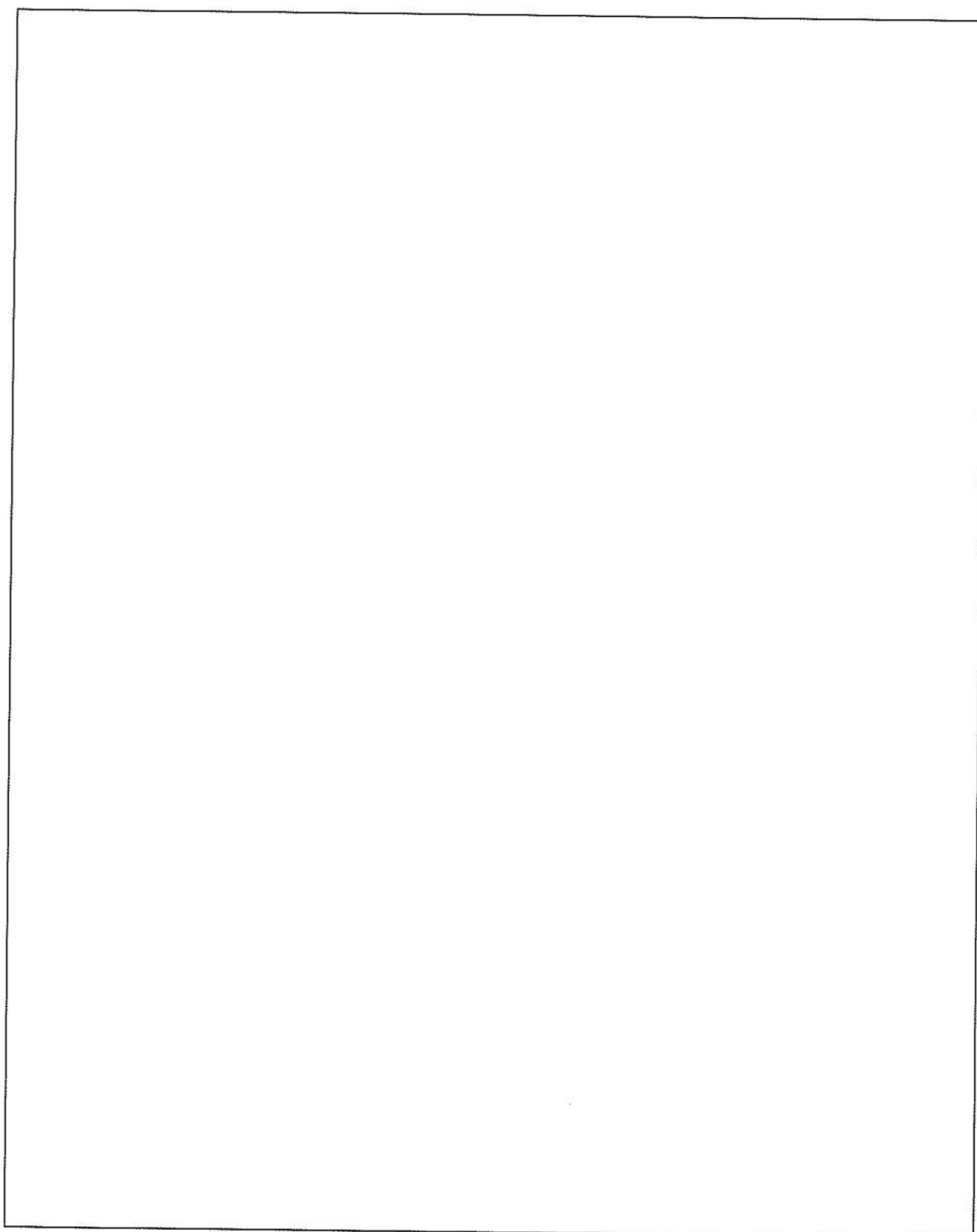
Q.14 Draw a freehand realistic pencil sketch of a spoon dipped partially in a transparent glass half filled with clear water.



Q.15 You have a foreign friend in social media. She does not have much idea how Indian schools look like. Make a freehand sketch of your school to share with your friend.



Q.16 Draw a coloured freehand sketch of a village fair.



END OF THE QUESTION PAPER

SPACE FOR ROUGH WORK ONLY

SPACE FOR ROUGH WORK ONLY

SPACE FOR ROUGH WORK ONLY

SPACE FOR ROUGH WORK ONLY

SPACE FOR ROUGH WORK ONLY



DO NOT WRITE ON THIS PAGE**Section-wise Distribution of Marks**

Sections	Question No.	Page No.	Maximum Marks	Marks Obtained
Section A (Architectural Awareness)	Q. 1	3 - 7	30	
	Q. 2	8	10	
	Q.3	9	10	
	Q.4	10	10	
Section B (Geometrical Drawing)	Q.5	11	20	
	Q.6	12	20	
	Q.7	13	20	
Section C (Three Dimensional Perception)	Q.8	14	20	
	Q.9	15	20	
	Q.10	16	20	
Section D (Imagination and Aesthetic Sensitivity)	Q.11	17	20	
	Q.12	18	20	
	Q.13	19	20	
Section E (Freehand Drawing)	Q.14	20	20	
	Q.15	21	20	
	Q.16	22	20	
TOTAL MARKS			300	