Undergraduate Common Entrance Examination for Design

UCEED 2025

Question Paper

Paper Specific Instructions

1. The total duration of the examination is 3 hours. The question paper contains two parts – **Part A** and **Part B**. The duration of **Part A** is **2 hours**. **Part B** will begin after **Part A** ends. The duration of **Part B** is **1 hour**.

2. **Part A** is divided into three sections: 1, 2 and 3. All sections are compulsory. Questions in each section are of different types. There are a total of **57 questions** in **Part A** carrying a total of 200 marks. Questions of **Part A** will appear on the computer **for the first 2 hours**. Answers to **Part A** have to be entered in the **computer within the first 2 hours**.

3. **Part B** is also compulsory and contains **2 drawing questions** of 50 marks each. Questions of **Part B** will appear on the computer **after 2 hours**. Answers to **Part B** have to be given in the **answer book** provided by the invigilator.

4. Marking scheme of **Part A** is as follows:

Sec-tion	Type of questions	Number of questions	Marks for correct answer	Marks for wrong answer	Marks for each question not attempted	Total marks for the section
1	Numerical Answer Type (NAT)	14	4	0	0	56
2	Multiple Select Question (MSQ)	15	Partial Marking	−1	0	60
3	Multiple Choice Question (MCQ)	28	3	−0.71	0	84
Total		57				200

5. **Section 1: Numerical Answer Type (NAT):** 14 questions (4 marks each; **no negative** marks). For these questions, **the answer is a number** that needs to be entered using the virtual keyboard on the computer screen. No choices will be shown for these questions. Questions from 1 to 14 belong to this section.

6. **Section 2: Multiple Select Questions (MSQ):** 15 questions. Each MSQ may have **one or more than one correct choice(s)** out of the four given. The following is the marking scheme:

> **Full Marks: (+4)** *If only (all) the correct option(s) is(are) chosen and NONE of the incorrect options is chosen.*
>
> **Partial Marks: (+3)** *If all the four options are correct but ONLY three options are chosen and NONE of the incorrect options is chosen.*
>
> **Partial Marks: (+2)** *If three or more options are correct but ONLY two options are chosen, both of which are correct and NONE of the incorrect options is chosen.*
>
> **Partial Marks: (+1)** *If two or more options are correct but ONLY one option is chosen and it is a correct option and NONE of the incorrect options is chosen.*
>
> **Zero Marks: (0)** *If NONE of the options is chosen (i.e. the question is unanswered).*
>
> **Negative Marks: (-1)** *In all other cases.*

Questions from 15 to 29 belong to this section.

7. **Section 3: Multiple Choice Questions (MCQ):** 28 questions (3 marks each for the correct answer; 0.71 negative marks for incorrect answers). Each MCQ has four choices out of which **ONLY ONE is the correct answer**. Questions from 30 to 57 belong to this section.

8. **Part B (100 Marks)** contains **two drawing questions** of 50 marks each. Both questions in **Part B** are mandatory. There is NO NEGATIVE marking in this section. Questions 58 and 59 belong to this section.

9. Calculators, charts, graph-sheets, mathematical tables, mobile phone, watches of any type and other electronic gadgets are **NOT** allowed in the examination hall.

10. Blank sheets of paper will be provided for rough work.

PART A

Section 1: Numerical Answer Type (NAT) questions

Section 1(56 Marks) of Part A contains a total of 14 **Numerical Answer Type (NAT)** *questions. For each question, the answer is a real number that needs to be entered using the virtual keyboard on the monitor. No choices will be shown for these questions. There is* **NO NEGATIVE** *marking for this section. Each correct answer will be awarded 4 marks. Questions that are not attempted or answered incorrectly will be given zero mark. Questions from 1 to 14 belong to this section.*

Q.01 A painter mixes white and black paints to create different shades in two different buckets. He prepares 10 kg in one bucket with 20% black paint in it. He then prepares 20 kg of another shade in the second bucket with 20% black paint in it. He pours the second bucket into the first one. What is the percentage of black paint in the mixture?

Q.02 *"Betty bought some butter but the butter was too bitter, so she put a little gummy to make the bitter butter yummy."*

In the above sentence, if you replace every letter 't' with letter 'b', what is the total number of instances in which the same letter appears at least twice in a word?

Q.03 In the 3 × 3 square on the left, the numbers from 1 to 9 have been filled so that the sum in each row / column / diagonal adds up to 15. If the same exercise is to be carried out for the 4 × 4 square, using the numbers from 1 to 16, what will be the sum of the numbers in each row / column / diagonal?

**Q.04** 10 people are standing in a circle. Each person is assigned a number as shown in the figure below. The first person (numbered 1) is removed. Thereafter, in the clockwise direction, every third person is removed and this is repeated till only two people are left. What is the sum of the numbers assigned to the two people who are left at the end?
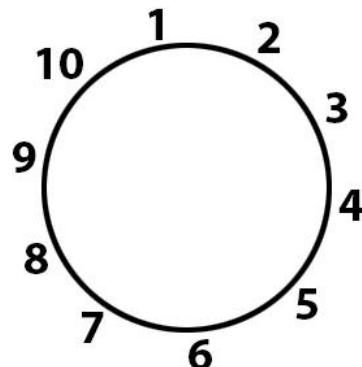

Q.05 A cube 4 cm x 4 cm x 4 cm has all its corners chamfered as shown in the figure below. On each of its faces it has got a small tetrahedral notch having edges of 1 cm each. What is the sum of the number of vertices and the number of edges in this solid?
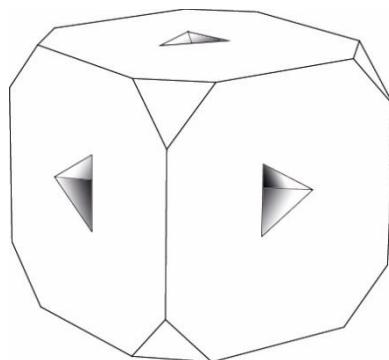
Q.06 With a straight cut you can slice a circular piece of paper into two pieces. A second cut that crosses the first cut will produce a maximum of four pieces. What is the maximum number of pieces that you can get with a total of four straight cuts?

Q.07 What is the highest number of occurrences of a shape in the figure shown?
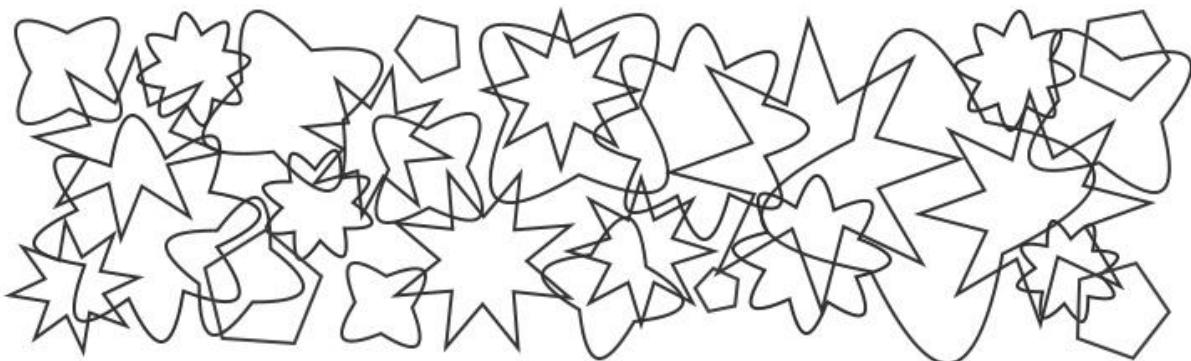
Q.08 Each of the rings in the chain in the given figure has an outer diameter of 5 cm and a cross-sectional diameter of 1 cm. What is the maximum end to end length of the chain in cm?

Q.09 If 1 inch = 25 mm = 6 pica and 1 pica = 12 points = 16 pixels, what is 6 points + 2 inches + 3 picas + 8 pixels + 25 mm, represented in pixels?

Q.10 What number will replace the question mark?
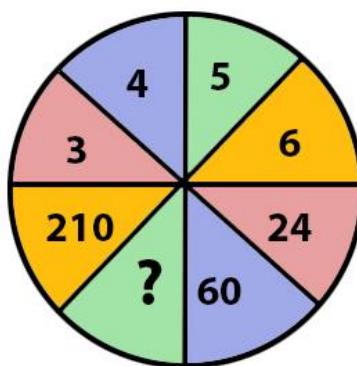
Q.11   What three-digit number can be made from the digits 2, 3, 5, and 7, such that no two digits of the three-digit number are the same and the three-digit number is divisible by each of the digits in it?

Q.12   27 cubes of edge 10 cm are arranged to create a larger cube. If the cubes at the eight corners are replaced with spheres of diameter 10 cm, what is the minimum number of cubes that do not touch any of the spheres?

Q.13   Some of the shapes in the image K are either flipped or rotated in the image J. What is the number of flipped shapes in image J?

K   J
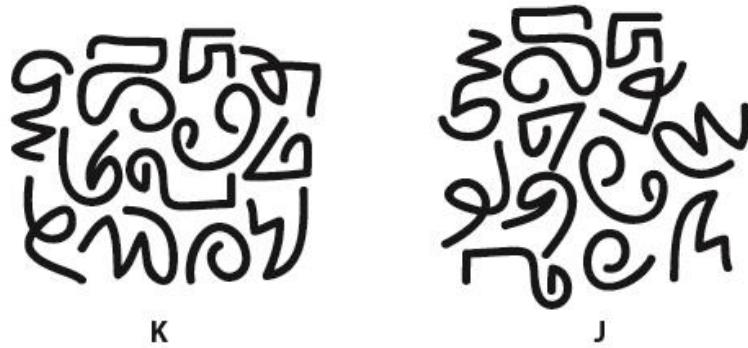
Q.14   How many different patterns of pens are present in the given figure?
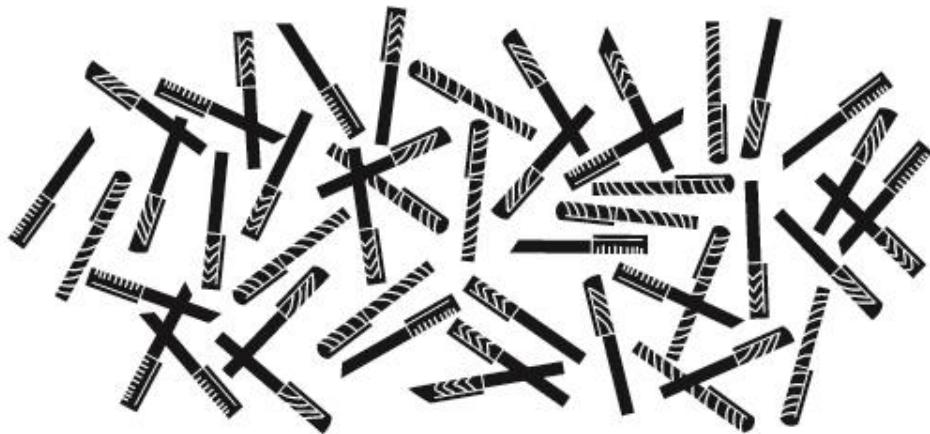
Section 2: Multiple Select Questions (MSQ)

Section 2 (60 Marks) of Part A contains a total of 15 **Multiple Select Questions (MSQ)**. Each question may have **one or more than one correct choice(s)** out of the four given. The following is the marking scheme:

Full Marks: **(+4)** *If only (all) the correct option(s) is(are) chosen and NONE of the incorrect options is chosen.*

Partial Marks: **(+3)** *If all the four options are correct but ONLY three options are chosen and NONE of the incorrect options is chosen.*

Partial Marks: **(+2)** *If three or more options are correct but ONLY two options are chosen, both of which are correct and NONE of the incorrect options is chosen.*

Partial Marks: **(+1)** *If two or more options are correct but ONLY one option is chosen and it is a correct option and NONE of the incorrect options is chosen.*

Zero Marks: **(0)** *If NONE of the options is chosen (i.e. the question is unanswered).*

Negative Marks: **(-1)** *In all other cases.*

Questions from 15 to 29 belong to this section.

Q.15 Which of the options below can be rearranged to make image Q?
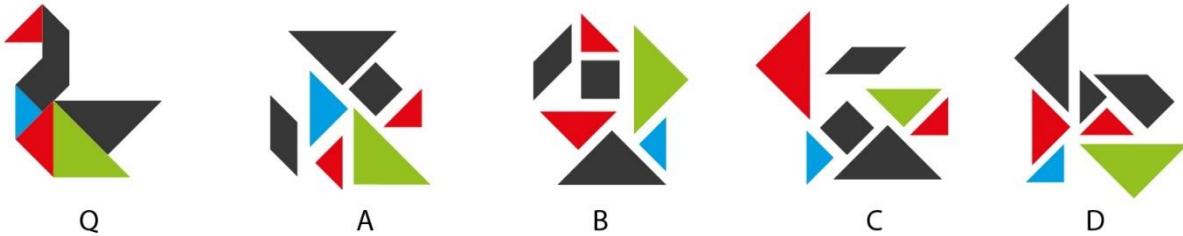
**Q.16** The Tropic of Cancer passes through which of the states shown below?
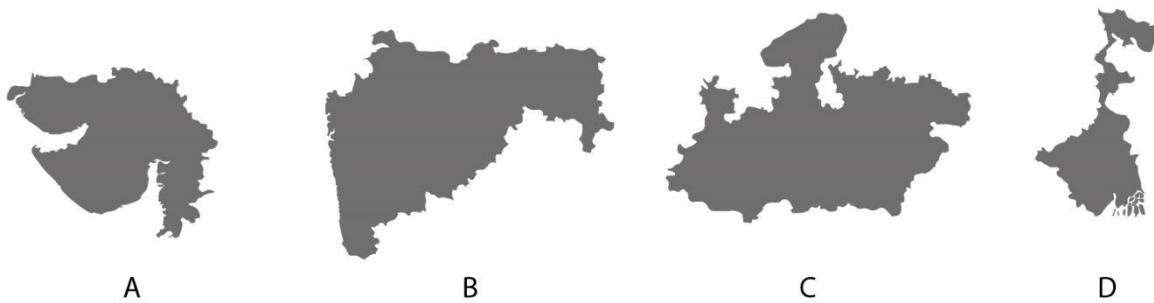
**Q.17**   Which of the following is / are TRUE for the strip of paper shown in the image?

A. It has two edges.
B. An ant can walk all over the surface of the strip without having to cross an edge.
C. A rotating belt that is similar to the strip of paper will have a uniform wear and tear.
D. This is an optical illusion that can be created as a 2D image but is not possible in 3D.

Q.18   Which of the options is / are CORRECT?

A. The cap of a water bottle is tightened by rotating it in the clockwise direction (as seen from the top).
B. To turn on a tap, the tap head is rotated clockwise; to turn it off it is rotated counter-clockwise (as seen from the top).
C. To loosen a nut of a car wheel, a spanner is turned counter-clockwise clockwise (from the point of view of the person using the spanner).
D. The earth as seen from the North Pole rotates clockwise about its axis.

Q.19 In the image below, gear 1 rotates in the direction of the arrow. Which of the statements is / are CORRECT?
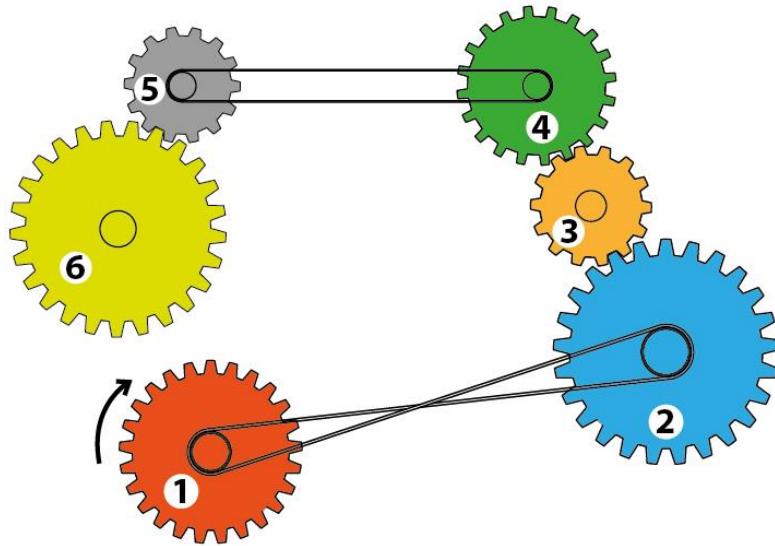
- A. 1 and 6 rotate in the same direction.
- B. 3 and 6 rotate in the opposite direction.
- C. 1 and 4 rotate in the opposite direction.
- D. 2 and 6 rotate in the same direction.

Q.20 Which of the options does NOT / do NOT match the pieces in the jigsaw puzzle shown in image K?


K

A   B   C   D

Q.21 P and Q show two different views of the same solid object. Which of the options represent(s) the top view of the solid object?
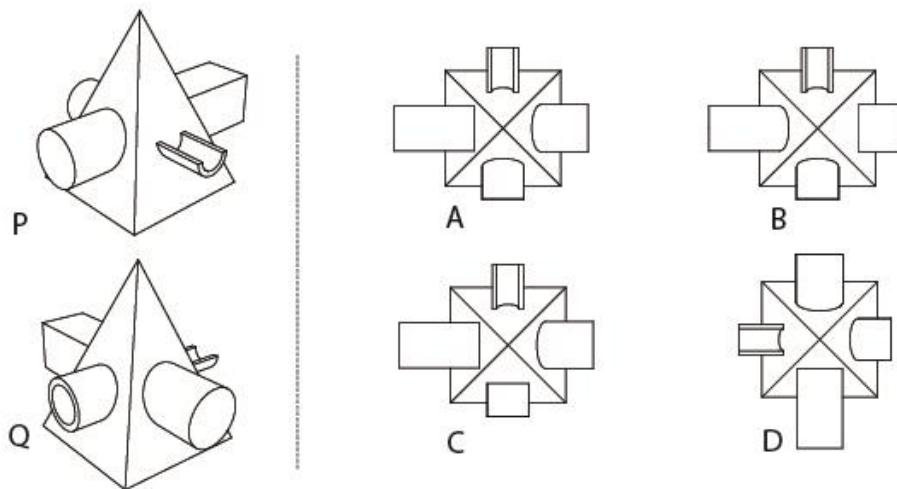
Q.22 Which consultant(s) to the Government of India suggested that the metal *lota* (shown in the given figure) used by many Indians is an appropriate symbol for indigenous design traditions?

A. Walter Gropius
B. Charles Eames
C. Hannes Meyer
D. Ray Eames

Q.23 Given below are the silhouettes of two iconic figures in Indian history. Which of the following statements is / are TRUE?

A. Both had degrees in law

B. Both spent time in South Africa

C. The birthdays of both are in the same month

D. Both dressed in a manner that expressed their ideology

Q.24 Centuries ago, a rich man left behind a treasure represented as a red dot, in the schematic drawing below. If the corners of the triangle represent central locations in the states of Bihar, Telangana and Rajasthan, which is / are the state(s) where one could hunt for this treasure?
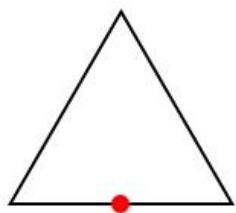

A. West Bengal
B. Chhattisgarh
C. Punjab
D. Madhya Pradesh

**Q.25** Which of the options has / have been created by using only a single wire?
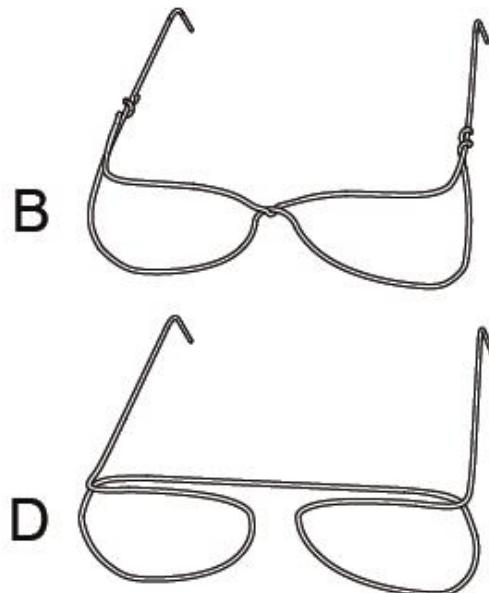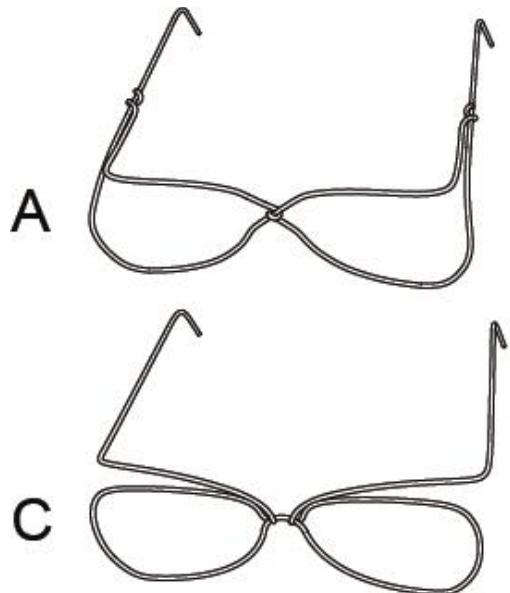
Q.26 Which of the options will replace the question mark?

■■|■ |■■■ ■■■| ■■■■■■

TEA   EAT   ATE   **?**

A. TATA
B. AAAAAA
C. TAAT
D. TTT

Q.27 Which of the options has / have shapes that DO NOT match the outlines in figure K?
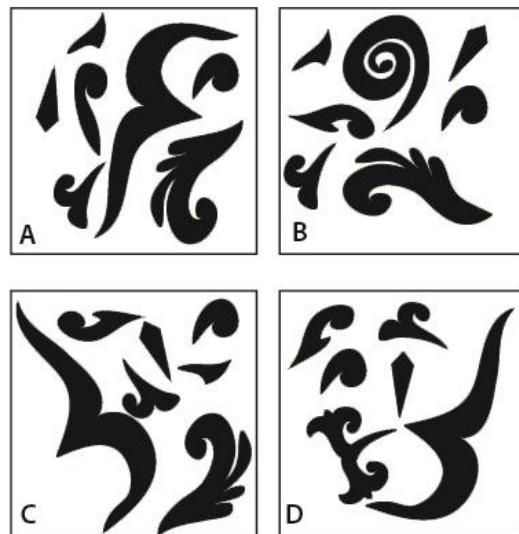
Q.28 An object was sharply focused and a photograph was taken using a camera. The photographer wants to blur the background (change the depth of field) in the next photograph. This can be achieved by changing the

A. size of opening of the lens (aperture).
B. distance of the object from the camera and again focusing.
C. shutter speed to change the duration for which light enters the camera.
D. focal length of the lens.

**Q.29** Which of the options can be generated by revolving the quadrilateral in image K, about its edge?
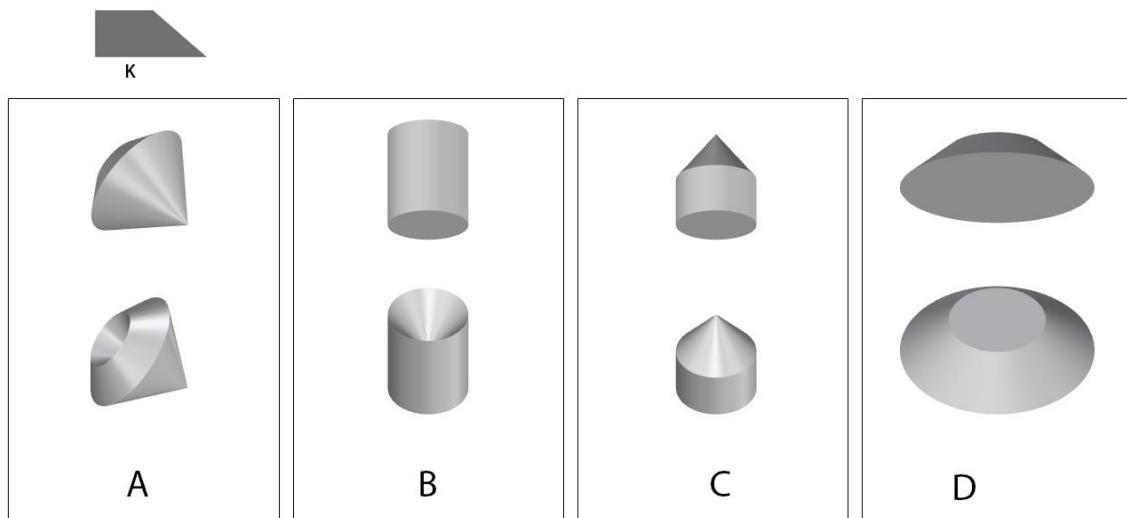
Section 3: Multiple Choice Questions (MCQ)

Section 3 (84 Marks) of Part A contains a total of 28 *Multiple Choice Questions (MCQ)*. Each question has four choices out of which ONLY ONE is the correct answer. There is NEGATIVE marking for this section. Each correct answer will be awarded 3 marks and each wrong answer will receive −0.71 (minus point seven one) mark. Questions not attempted will be given zero mark. Questions from 30 to 57 belong to this section.

Q.30 What is the length of the edge of the largest cube that can be placed inside a sphere of radius 10 cm?

A. 10 / (√ 2) cm
B. 10 / (√ 3) cm
C. 20 / (√ 2) cm
D. 20 / (√ 3) cm

**Q.31** What is the total number of triangles in the figure given below?
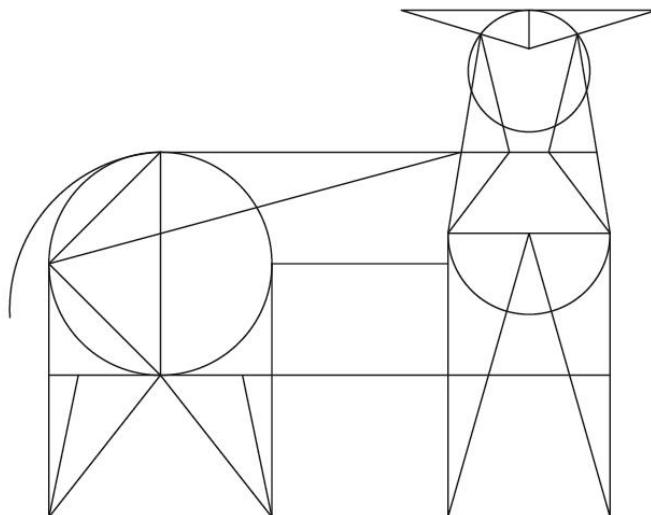
A. 24
B. 25
C. 26
D. 27

Q.32 Image K is rotated by an angle of 45 degrees anticlockwise. Which option represents the rotated image?
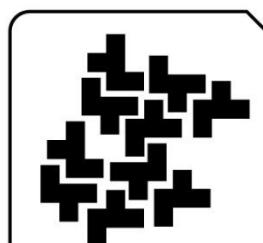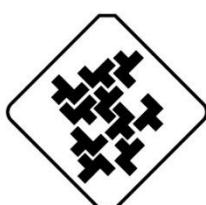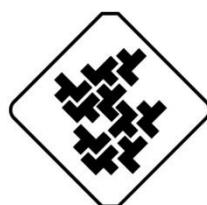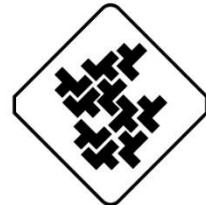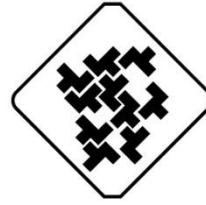
Q.33 Which of the options is the correct logo of India Post?

A   B   C   D

**Q.34** What is the next number in the sequence below?

341, 214, 123, 62, 25, ?

A. 6
B. 8
C. 9
D. 7

Q.35 Which option is the odd one out?

A. WOW MADAM
B. CIVIC ROTATOR
C. SOLO LEVEL
D. NOON SAGAS

Q.36. Which option will replace the question mark?
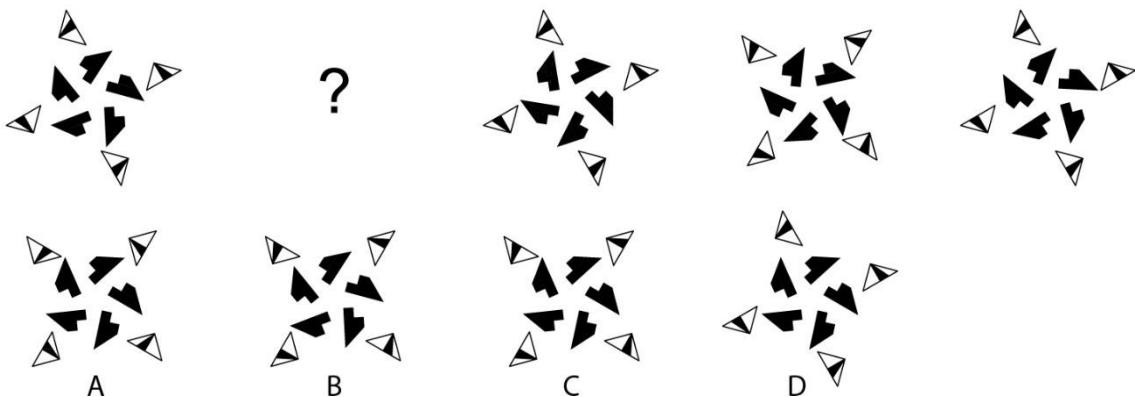
Q.37 *Phulkari, Chikankari, Sambalpuri* and *Paithani* are weaving traditions from different states of India. Which option lists them in the correct sequence?

A. Uttar Pradesh, Maharashtra, Assam, Punjab
B. Punjab, Uttar Pradesh, Odisha, Maharashtra
C. Uttar Pradesh, Odisha, Punjab, Maharashtra
D. Odisha, Uttar Pradesh, Assam, Punjab

Q.38 What is the number of fonts used in the following sentence?

From the time of Leonardo Da Vinci, until the end of the eighteenth century, Science and Art were much closer than today.

   A. 3
   B. 6
   C. 5
   D. 9

Q.39 The _____ government organizes the Hornbill Festival each December, promoting cultural heritage and fostering interaction between tribes. The festival has been named after a _____.

A. Chhatisgarh, bird
B. Nagaland, bird
C. Manipur, flower
D. Shillong, tribal musical instrument

Q.40 The lost wax process is used for _____.

    A. Honey making
    B. Jaggery making
    C. Batik painting
    D. Metal casting

Q.41 You need to hang a large rectangular picture frame on a wall in an empty room. To ensure that it is vertical (and not tilted), which of the following will help you hang the picture correctly (not tilted)? (No additional items are to be used other than the ones specified in each of the options)

    A. A wooden stick, a cutter and a pencil
    B. A pencil, a compass and a cutter
    C. A flexible and transparent pipe and a mug of water
    D. Some card paper, a steel-ruler and a pair of scissors

Q.42 Which of the options is the odd one?

A. Cobra
B. Krait
C. Rat Snake
D. Viper

Q.43 Which of the following options is the odd one?

    A. Electroplating
    B. Anodizing
    C. Powder Coating
    D. Drilling

Q.44 What is the next number in the sequence below?

7, 11, 18, 30, 50, ___

A. 83
B. 84
C. 85
D. 86

Q.45 The well-known masterpiece "Mona Lisa" was painted by Leonardo Da Vinci in the 16th Century. Nearly 500 years later another artist made a satirical reference to it; he copied the "Mona Lisa" but painted a moustache on her! Which art movement was this artist associated with?

A. Dadaism
B. Cubism
C. Impressionism
D. Pop-art

Q.46 Which of the options matches the fruit and the leaf correctly?
(the images are not to scale)

A. Mango-1, Chikoo-2, Guava-3, Jackfruit-4
B. Mango-3, Chikoo-4, Guava-2, Jackfruit-1
C. Mango-4, Chikoo-2, Guava-3, Jackfruit-1
D. Mango-2, Chikoo-3, Guava-1, Jackfruit-4

Q.47 Which are the rivers numbered from 1 to 4 in the map below?

- A. Ravi, Ganga, Krishna, Cauvery
- B. Sutlej, Yamuna, Godavari, Cauvery
- C. Indus, Ganga, Godavari, Krishna
- D. Chenab, Yamuna, Godavari, Cauvery

Q.48 Which of the sequences in the options will result in the right pattern for a running man?
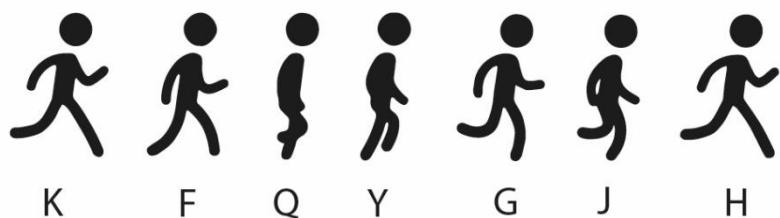
A: K Q J G Y F H   B: K G J Q Y F H

C: K F Q G Y J H   D: K F Q J Y G H

Q.49   Which of the following is the hardest wood?

    A. Teak
   B. Thorny Acacia
    C. Mango
    D. Rosewood

Q.50   Hex codes are used to specify colours on the computer. What colour is the Hex Code CCCCCC?

    A. White (100% white)
    B. Black (100% black)
    C. Dark Grey (80% black, 20% white)
    D. Light Grey (20% black, 80% white)

Q.51   Which is the correct representation in the options, if the image K shown below is flipped about the vertical axis (shown on the right side of K)?
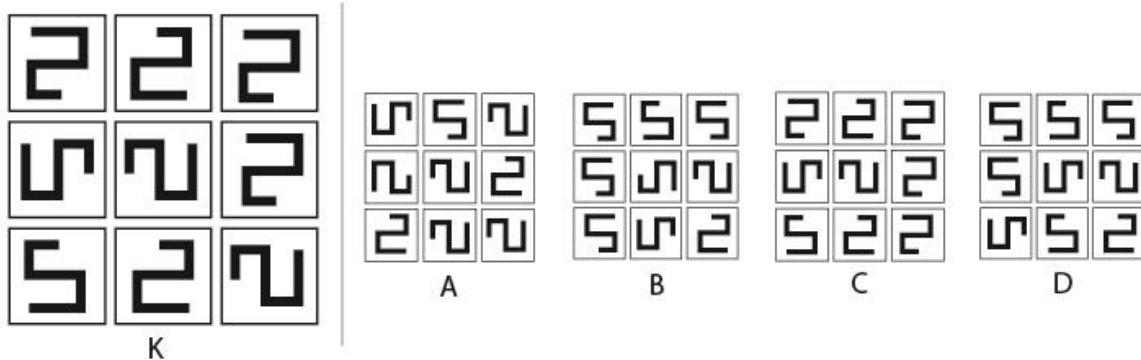

Q.52   Shapes are cut out from two Black Discs, Disc-X and Disc-Y as given below. Identify the correct image, when Disc-Y is kept on top of Disc-X and rotated 60 degrees anti-clockwise.
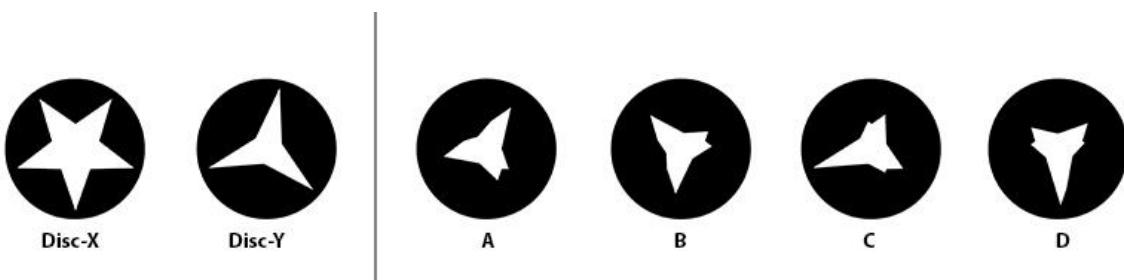
Q.53 In the cursed land of *Weirdisthan*, strength of animals was disproportionately distributed. Horse has half the strength of a Dog and four times the strength of an Elephant. Monkey has three times the strength of a Rhino. Elephant has half the strength of a Rhino. One Dog was becoming a danger for other animals and they decided to assign a team of animal soldiers to overpower him. Which team of soldiers managed to overpower the dog?

A. One Rhino and One Monkey
B. One Rhino, One Horse and One Elephant
C. One Horse and One Monkey
D. Two Horses

Q.54 A clock is displaced horizontally at a uniform rate along the direction shown. If the tip of the hour hand is traced from 2 AM to 9 AM, which option shows the correct tracing pattern?
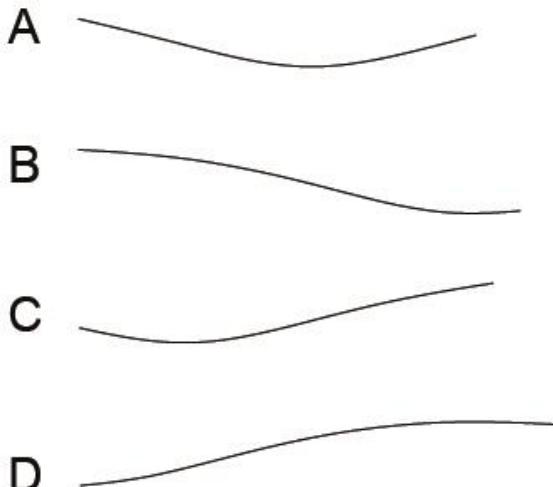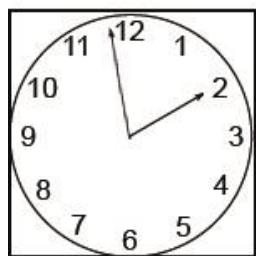
Q.55 Which of the options shows the word "TRANSFORM" as it would appear after it is reflected horizontally along AXIS 1 and then vertically along AXIS 2, as indicated in the figure below?


Q.56 The shape L is extruded along Z-axis to form a solid as shown in the figure. How many shapes in the Set K will have more than 8 surfaces when extruded along Z-axis?

Set K
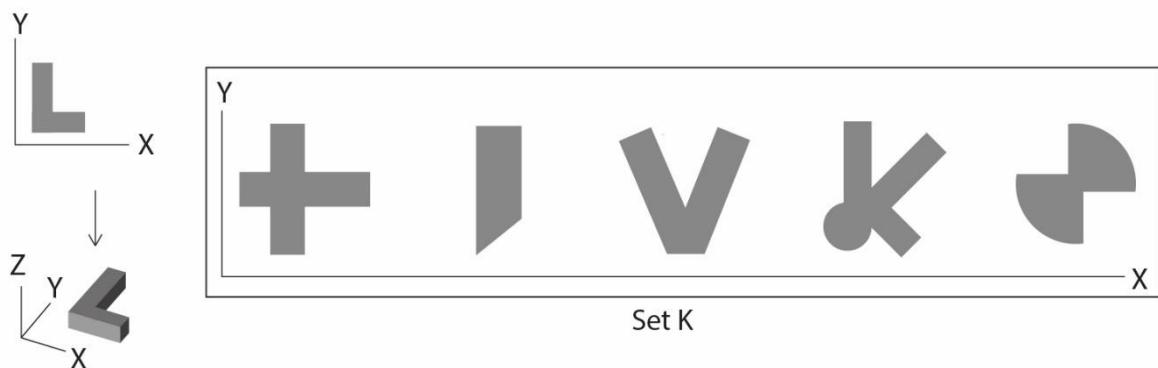
A. 2
B. 3
C. 4
D. 5

Q.57 Residents of planet Earthella are planning to abandon it and fly to planet Marsella because of an acute water crisis. They may choose any of the flight paths connecting Earthella to Marsella through a set of intermediate refuelling stations. How many unique flight paths be charted out if paths cannot retrace any segment that they have already traversed or revisit any station (including Earthella)?
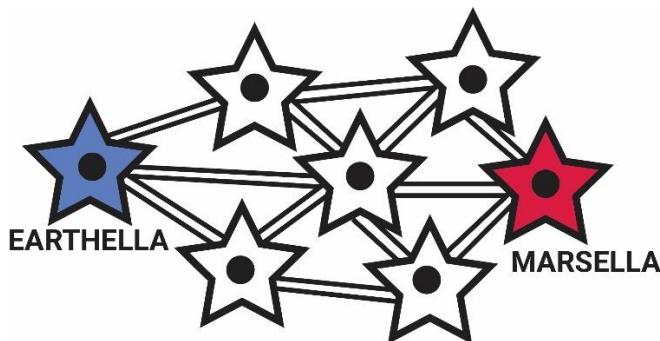
A. 18
B. 19
C. 20
D. 21

PART B (60 minutes – 100 marks)

Q. 1   [50 Marks]

Drawing

The competitive examinations are finally over and you are going on a holiday. You are at the nearest railway station with your family and relatives, waiting for the train that you can see, arriving. The platform is bustling with activity. Other travellers with luggage, vendors and porters (and whatever else you are likely to observe) are also on the platform. Imagine and draw what you see, giving prominence to your family and relatives.

Note:

- Make pencil sketches only
- Do not use colour

Evaluation Criteria:

- Observation
- Composition of figures and objects
- Sense of perspective and proportion
- Quality of lines
- Attention to details

Q. 2   [50 Marks]

Design Aptitude

A visit to a museum or a zoo is always something we look forward to with much excitement. But such visits are very tiring too; after about an hour or so we look for a place to sit – a chair or bench, that is never nearby. What if we could carry our own chair everywhere?

Design a portable seating device that you could carry in your backpack or hand bag. It should be light enough to carry around, small enough to fit into your bag, easy to use, and good to look at.

Show the seating device when:
1) it has just been taken out of the bag and
2) it is ready to sit on.

Note

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

Evaluation Criteria

- Suitability of the design for the given context
- Ease of carrying and use
- Uniqueness of design
- Attention to detail
- Explanation of features through visuals only
- Clarity of the sketch and quality of presentation