

# Undergraduate Common Entrance Examination for Design

## UCEED 2026 MOCK 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**.
2. **Part A** duration is **2 hours**. It is divided into three sections: 1, 2 and 3. All sections are compulsory. There are a total of **57 questions** in Part A carrying a total of **200 marks**.
3. **Part B** duration is **1 hour**. It is compulsory and contains **2 drawing/design aptitude questions** of 50 marks each (Total 100 marks).
4. The marking scheme of Part A is as follows:

Section	Type of Questions	Number of Questions	Marks for Correct Answer	Marks for Wrong Answer	Total Marks
<b>1</b>	Numerical Answer Type (NAT)	14	4	0	56
<b>2</b>	Multiple Select Question (MSQ)	15	4 (Partial Marking)	-1	60
<b>3</b>	Multiple Choice Question (MCQ)	28	3	-0.71	84
<b>Total</b>		<b>57</b>			<b>200</b>

1. **Section 1 (NAT):** For these questions, the answer is a numerical value. There is NO negative marking.
2. **Section 2 (MSQ):** Each question may have one or more correct choices. **Partial marking rules apply** (as per official UCEED guidelines). Negative marking is -1.
3. **Section 3 (MCQ):** Each question has only ONE correct answer. Negative marking is -0.71.
4. **Part B:** Both drawing questions are mandatory. There is NO negative marking.

# PART A (200 Marks)

## Section 1: Numerical Answer Type (NAT)

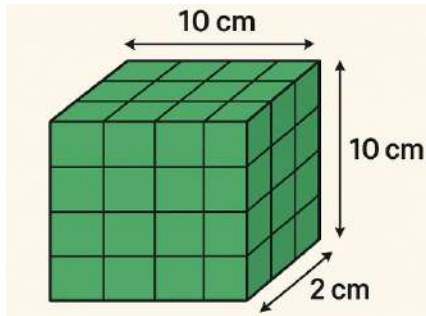
(14 Questions, 4 Marks each, NO Negative Marking)

**Q.01** A designer uses two colours, Indigo and Crimson, for a new fabric line. In the first batch (120 meters), the ratio of Indigo to Crimson is 4:1. In the second batch (80 meters), the ratio is 1:3. If both batches are mixed, what is the ratio of Indigo to the total fabric length (in percentage, round to the nearest integer)?

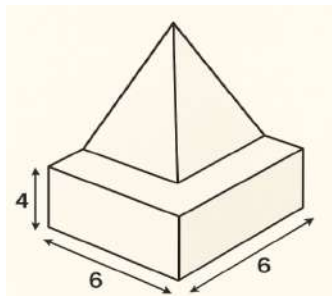
**Q.02** "A designer's portfolio holds its power in the careful detail." In the above sentence, if you replace every letter 'e' with letter 'a', what is the total number of instances in which the same letter appears at least three times consecutively in a word?

**Q.03** In a pattern sequence, the number 1 is placed in cell 1 x 1. The next number is 2 in cell 2 x 2. The third number is 3 in cell 3 x 3, and so on. The number in cell N x N is N. If the sum of all numbers in any row, column, or main diagonal of an N x N square is equal to 120, what is the value of N?

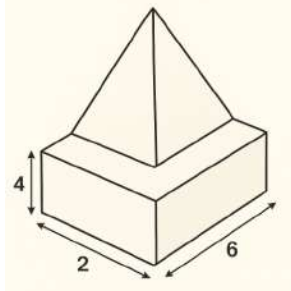
**Q.04** A 10 cm cube is painted green on all faces. It is then cut into 125 smaller cubes of 2cm x 2cm x 2cm. A smaller cube is considered 'partially green' if exactly two of its faces are painted green. What is the total number of 'partially green' cubes?



**Q.05** A cylindrical pencil has a radius of 0.4cm and a length of 15cm. If the pencil is sharpened such that the pointed cone tip has a height of 1cm and retains the same radius, what is the volume (in  $\text{cm}^3$ ) of the wood and lead removed from the pencil, rounded to one decimal place? (Use pi approx 3.14)



**Q.06** An object is made by attaching a rectangular block of  $6 \times 4 \times 2$  units to the base of a square-based pyramid with base  $6 \times 6$  units and height 4 units. The two faces where they meet are removed. What is the total number of exposed surfaces (faces) on the final object?



**Q.07** A shape sequence follows a pattern of rotation and colour inversion. The first shape is a solid black square. The second is a  $45^\circ$  rotated white square on top of the black square. The third is a  $90^\circ$  rotated solid black square. If this sequence continues, what is the total degrees of rotation (accumulated, clockwise) for the 7th shape? (Enter the value in degrees).

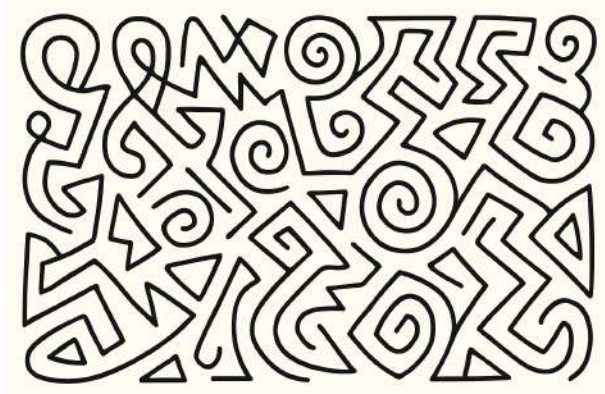


**Q.08** A clock face has an hour hand and a minute hand. At 2:30PM, what is the smaller angle (in degrees) between the hour hand and the minute hand?

**Q.09** If 1 *Point* = 0.35mm, 1 *Pica* = 12Points, and 1 *Design Unit* = 2 Picas. How many mm are equal to 3Picas + 5 Design Units, rounded to the nearest integer?

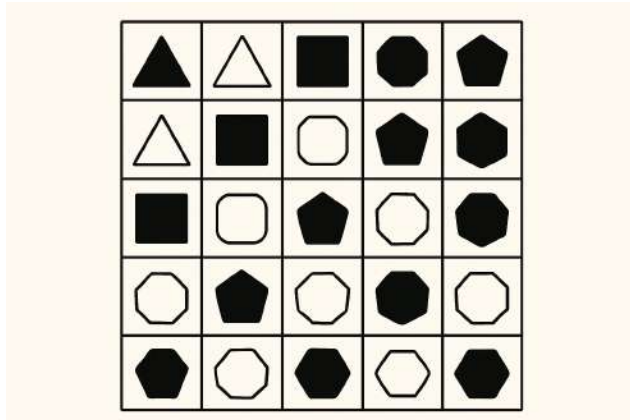
**Q.10** What is the number that replaces the question mark in the following series:  
1, 4, 27, 256, ?

**Q.11** A complex abstract line art drawing contains several distinct, smaller, recurring motifs (e.g., a specific loop, a sharp corner, a spiral). What is the highest number of times the single most frequently occurring motif repeats itself in the figure?



**Q.12** In a group of 10 design students, 6 specialize in Product Design, 5 in Graphic Design, and 4 in Fashion Design. 3 specialize in both Product and Graphic, 2 in Product and Fashion, and 1 in Graphic and Fashion. If no student specializes in all three, how many students specialize in **none** of the three?

**Q.13** A 5x5 grid contains a sequence of abstract shapes that evolve based on two rules: 1) The number of sides increases by one in each step, and 2) The fill colour alternates between black and white. If the sequence starts with a black triangle in the top-left, what is the number of sides of the shape in the bottom-right cell?



**Q.14** A cuboid has sides in the ratio 2:3:4. The surface area of this cuboid is  $208\text{ cm}^2$ . What is the length of the longest side (in cm)?

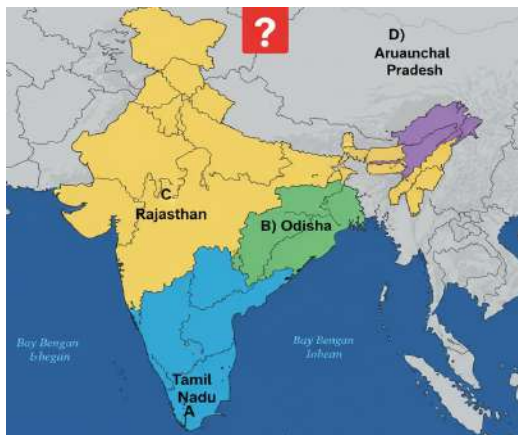
## Section 2: Multiple Select Questions (MSQ)

(15 Questions, 4 Marks each, -1 for incorrect answer/combination)

**Q.15** Which of the following statements is/are TRUE for a cube?

- A. It has 8 vertices and 6 faces.
- B. It can be folded from a net that consists of 6 squares in a single row.
- C. All its cross-sections are squares.
- D. The longest diagonal connecting opposite vertices is  $\sqrt{3}$  side length.

**Q.16** A map shows the outline of four Indian states: Tamil Nadu, Odisha, Rajasthan, and Arunachal Pradesh. Which of the states shown are coastal states?

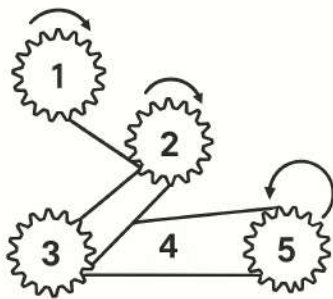


- A. (State A)
- B. (State B)
- C. (State C)
- D. (State D)

**Q.17** Which of the following is/are an example of *Affordance* in product design?

- A. A door handle that is flat and horizontal, suggesting it should be pushed.
- B. A red light on a coffee machine that turns green when ready.
- C. A prominent, large icon on a smartphone screen that suggests it is tappable.
- D. The knurled edge of a volume knob on a stereo, suggesting it should be rotated.

**Q.18** In a system of five interconnected gears, Gear 1 rotates clockwise. Gears 1 and 2 are interlocked. Gears 2 and 3 are connected by a belt (crossed). Gears 3 and 4 are interlocked. Gears 4 and 5 are connected by a belt (straight). Which of the following statement(s) is/are CORRECT?



- A. Gear 2 rotates counter-clockwise.
- B. Gear 3 rotates in the same direction as Gear 1.
- C. Gear 4 rotates counter-clockwise.
- D. Gear 5 rotates in the opposite direction to Gear 1.

**Q.19** Which of the following properties are generally associated with **Bamboo** as a material?

- A. High tensile strength, similar to steel for its weight.
- B. Highly durable and non-biodegradable due to its natural silica content.
- C. Excellent earthquake resistance in construction.
- D. Rapidly renewable and sustainable.

**Q.20** A puzzle uses three shapes: a square, a triangle, and a rectangle. The goal is to arrange them to form a single, larger rectangle. Which rule must be followed for a successful re-composition?

- A. The pieces can overlap if needed.
- B. All pieces must be used, and they must not overlap.
- C. Only two of the three pieces are needed.
- D. The pieces must be arranged in a specific color order.

**Q.21** Which famous design movement(s) originated in Germany during the 20th century?

- A. Art Nouveau
- B. Bauhaus
- C. Ulm School of Design (Hochschule für Gestaltung Ulm)
- D. De Stijl

**Q.22** A solid cube is painted red on all its faces. It is then cut into 64 smaller cubes of equal size. How many of the smaller cubes will have exactly one face painted red?

- A. 8
- B. 16
- C. 24
- D. 32

**Q.23** Which of the following is/are the principle(s) of the Gestalt theory of visual perception?

- A. Proximity
- B. Alignment
- C. Closure
- D. Similarity

**Q.24** In photography, which of the following adjustment(s) can be used to control the **Motion Blur** in an image?

- A. Changing the Aperture (f-stop).
- B. Changing the Shutter Speed.
- C. Adjusting the ISO (sensor sensitivity).
- D. Using a neutral density filter.

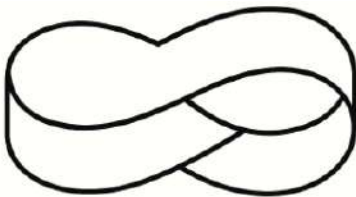
**Q.25** Which of the following textiles/crafts are primarily associated with the state of **Gujarat**?

- A. Bandhani
- B. Ikat
- C. Patola
- D. Kasuti

**Q.26** Which of the following objects, if made of a single continuous wire, would NOT require the wire to cross itself?

- A. A pair of reading spectacles (with earpieces).
- B. A simple paper clip.
- C. A coiled spring.
- D. A figure-eight loop.

**Q.27** A Möbius strip is shown. Which of the following statements about the Möbius strip is/are TRUE?



- A. It has only one surface.
- B. Cutting it along the centerline results in two separate, smaller strips.
- C. It is non-orientable.
- D. It has a single boundary edge.

**Q.28** Which of the following colours are generally considered as **Primary Colours** in the **Subtractive (CMYK)** colour model used in printing?

- A. Cyan
- B. Red
- C. Yellow
- D. Magenta

**Q.29** A 2D shape is a right-angled triangle. Which of the following 3D solid(s) can be generated by revolving the triangle about one of its edges?



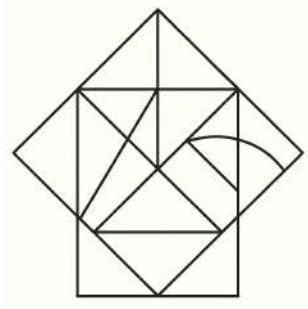
- A. Cone
- B. Cylinder
- C. Sphere
- D. Double-cone (Bicone)

### Section 3: Multiple Choice Questions (MCQ)

(28 Questions, 3 Marks each, -0.71 for incorrect answer)

**Q.30** What is the total number of surfaces in a solid octahedron? A. 6 B. 8 C. 10 D. 12

**Q.31** A figure composed of straight lines and curves is shown. How many triangles, of any size, are present in the figure?



- A. 15
- B. 16
- C. 17
- D. 18

**Q.32** A word is written in capital letters as "MOTOM." If this word is reflected in a horizontal mirror, how will it appear?

- A. Same as the original word
- B. Completely reversed and unreadable
- C. Appears upside down but readable
- D. Only the first and last letters appear reversed

**Q.33** Which option is the odd one out based on geometric properties?

- A. Trapezoid
- B. Pentagon
- C. Rhombus
- D. Parallelogram

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

1, 8, 27, 64, ?

- A. 100
- B. 125
- C. 81
- D. 144

**Q.35** Which option is the odd one out?

- A. LAL MOHAN
- B. MADAM I'M ADAM
- C. RACECAR
- D. TENET

**Q.36** A sequence of letters follows a certain pattern:

A → C → F → J → ?

Which letter will come next in the sequence?

- A. K
- B. L
- C. N
- D. O

**Q.37** Which of the following cities is famous for the **Pattachitra** style of painting?

- A. Jaipur
- B. Pune
- C. Puri
- D. Varanasi

**Q.38** In typography, what term is used to describe the vertical distance between two consecutive lines of text?

- A. Tracking
- B. Kerning
- C. Leading
- D. Baseline

**Q.39** The **Kumbh Mela**, a major Hindu pilgrimage, is held every 12 years at which of the following four places?

- A. Nashik, Ujjain, Haridwar, Prayagraj
- B. Ayodhya, Mathura, Dwarka, Puri
- C. Varanasi, Gaya, Rameshwaram, Kedarnath
- D. Shirdi, Tirupati, Sabarimala, Pushkar

**Q.40** What is the primary material used in the traditional Indian craft of **Bidriware**?

- A. Copper
- B. Brass
- C. Zinc
- D. Silver

**Q.41** Which of the following is a process of joining two or more pieces of metal by causing them to merge into one another at the joint when heated to a high temperature?

- A. Casting
- B. Annealing
- C. Welding
- D. Forging

**Q.42** Which of the following is NOT one of the five elements of the traditional **Panchatattva** (Five Great Elements) in Indian philosophy?

- A. Vayu (Air)
- B. Jala (Water)
- C. Dhvani (Sound)
- D. Agni (Fire)

**Q.43** Which of the following is the softest known mineral on the Mohs hardness scale?

- A. Quartz
- B. Calcite
- C. Talc
- D. Gypsum

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

15, 30, 45, 60, ?

- A. 70
- B. 75
- C. 80
- D. 90

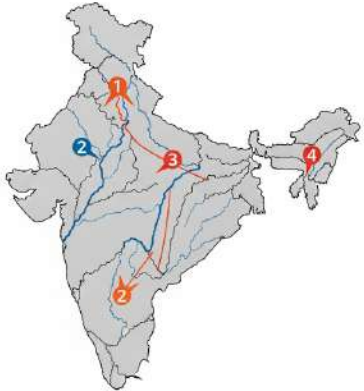
**Q.45** The architectural style characterized by pointed arches, ribbed vaults, and flying buttresses, prevalent in medieval Europe, is known as:

- A. Renaissance
- B. Romanesque
- C. Neoclassical
- D. Gothic

**Q.46** A list of famous architectural monuments is given: Qutub Minar, Gateway of India, Hawa Mahal, and Sanchi Stupa. Which of the following correctly matches each monument with its respective city?

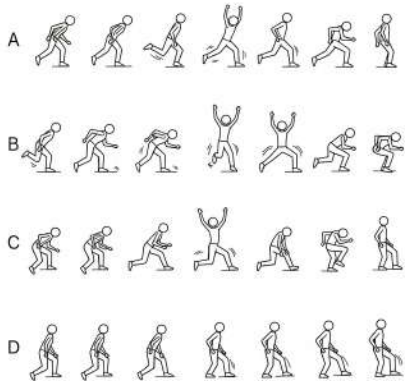
- A. Delhi, Mumbai, Jaipur, Sanchi
- B. Agra, Delhi, Udaipur, Pune
- C. Jaipur, Lucknow, Delhi, Patna
- D. Mumbai, Chennai, Hyderabad, Bhopal

**Q.47** A map of India is shown with four major rivers numbered 1 to 4 (e.g., Godavari, Mahanadi, Narmada, Krishna). Which option correctly identifies the four rivers in sequence?



- A. Narmada, Godavari, Krishna, Mahanadi
- B. Mahanadi, Narmada, Godavari, Krishna
- C. Krishna, Mahanadi, Godavari, Narmada
- D. Godavari, Krishna, Narmada, Mahanadi

**Q.48** A sequence of eight stick figures represents a jump cycle. Which of the options represents the correct sequence for a smooth, continuous jump?



- A. (Sequence A)
- B. (Sequence B)
- C. (Sequence C)
- D. (Sequence D)

**Q.49** Which of the following is the standard file format for exchanging 3D geometric data?

- A. TIFF
- B. DXF
- C. STL
- D. EPS

**Q.50** Hex code **#00FF00** represents which colour?

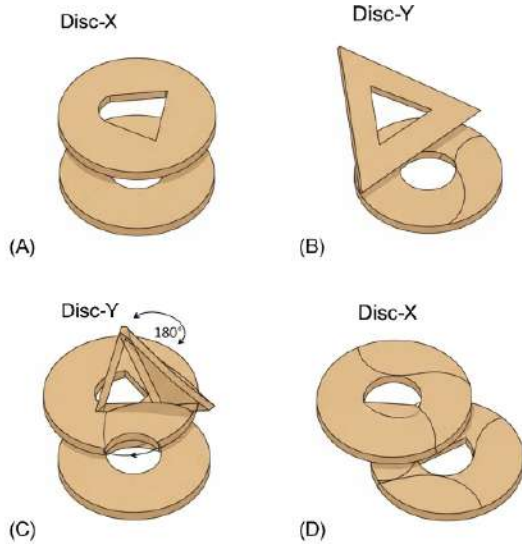
- A. Red
- B. Cyan
- C. Yellow
- D. Green

**Q.51** A 3x3 grid contains different simple shapes (squares, circles, triangles) following a pattern logic across rows and columns. Which option correctly fills the empty cell in the grid?

□	○	△
○	△	□
△	□	□

- A. ○
- B. □
- C. △
- D. ○

**Q.52** A disc, Disc-X, has a single cut-out of a quarter-circle. Another disc, Disc-Y, has a single cut-out of an equilateral triangle. Identify the correct image when Disc-Y is kept on top of Disc-X and rotated 180 degrees around its center point.



- A. (Image A)
- B. (Image B)

C. (Image C)

D. (Image D)

**Q.53** If 'A' means subtract, 'B' means multiply, 'C' means add, and 'D' means divide, what is the value of the expression:

18 D 6 C 12 A 4 B 2?

A. 20

B. 10

C. 16

D. 2

**Q.54** A plus-shaped (cross-shaped) 2D figure lies on the XY-plane. When this shape is extruded vertically along the Z-axis, a 3D solid is formed.

If a T-shaped 2D figure is also extruded along the same axis, how will the number of faces of the resulting solid compare to that of the plus-shaped solid?

A. The T-shaped solid will have **more faces**

B. The T-shaped solid will have **fewer faces**

C. Both will have the **same number of faces**

D. The T-shaped solid will have **twice the number of faces**

**Q.55** Which of the options shows the word **DESIGN** as it would appear after it is reflected vertically (along the Y-axis) and then rotated 90° clockwise?

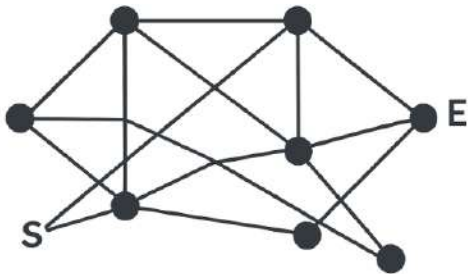
A. IGISED

B. N I S E D

C. D E S I G N (turned 90 degrees)

D. DESING

**Q.56** A network of paths connects a starting point S to an ending point E through a set of intermediate nodes. How many unique paths can be charted from S to E, if no node can be revisited?



A. 12

B. 14

C. 16

D. 18

**Q.57** Which of the following is the most efficient lighting technology in terms of Lumens per Watt?

A. Incandescent Bulb

B. Compact Fluorescent Lamp (CFL)

C. Halogen Lamp

D. Light Emitting Diode (LED)

## **PART B (60 minutes - 100 marks)**

### **Q. 1: Drawing [50 Marks]**

#### **Scene Composition & Observation**

You are observing a busy local **street market on a rainy evening** from the viewpoint of a small tea stall. People are rushing by with umbrellas, vendors are securing their makeshift plastic sheet roofs, and the street reflects the wet neon and vehicle lights. Draw what you see, giving prominence to the interaction between the vendors and the shoppers in this wet environment.

#### **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: Design Aptitude [50 Marks]**

#### **Product Design & Innovation**

People living in urban high-rise apartments often struggle to dry clothes indoors, especially during the monsoon.

Design a **portable, compact, and adjustable cloth drying solution** that can be temporarily mounted on any standard interior door or window frame without drilling or permanent fixtures. The solution must be safe, stable, and fold down easily when not in use.

Show the device when:

1. it is in its **compact, stowed state** (ready to be put away).
2. it is **deployed and ready to use** on a door/window frame, loaded with wet clothes.

#### **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.