

UCEED MCQ Mini Mock Test 01 — Offline Worksheet

Questions 1–8 and 13–14 (72 marks) — Southwide original shortened practice set inspired by UCEED question types, not a full official-pattern replica. The online mini mock covers 4 single-correct MCQs (Q9–12). The numerical-answer, multi-select and sketching/design sections below use response types the website's engine doesn't score yet, so they're provided here as a downloadable worksheet with the full official-tiered MSQ scheme, answer key and rubrics.

Marking scheme (for self-scoring)

Part A — NAT (Q1–4): +4 for the correct answer, 0 otherwise.

Part A — MSQ (Q5–8), official UCEED 2026 tiered scheme: +4 if all correct options are selected and no incorrect option is selected. +3 if the question has 4 correct options and exactly 3 of them are selected, with no incorrect option. +2 if the question has 3 or more correct options and exactly 2 of them are selected, with no incorrect option. +1 if the question has 2 or more correct options and exactly 1 of them is selected, with no incorrect option. 0 if unanswered. –1 in all other cases (e.g., any incorrect option selected). Source: official UCEED 2026 question paper structure (uceed.iitb.ac.in).

Part B — subjective (Q13–14): 20 marks each, assessed with the stated rubric.

Part A — Numerical Answer Type (NAT)

Q1. Painted cube

A cube is painted on all six faces and cut into 27 equal smaller cubes. How many small cubes have exactly two painted faces?

Q2. Clock angle

Enter the smaller angle, in degrees, between the hands of a clock at 3:30.

Q3. Number sequence

Find the next term: 2, 6, 12, 20, 30, ____.

Q4. Grid routes

A person moves from (0,0) to (3,2), taking only one-unit steps right or up. How many shortest routes are possible?

Part A — Multiple Select (MSQ)

Q5. Accessible drinking-water station

Which changes can generally improve the accessibility of a public drinking-water station?

- A. Providing controls at more than one reachable height
- B. Using only colour to communicate operating instructions
- C. Providing sufficient knee and toe clearance
- D. Adding tactile and high-contrast instructions

Q6. Emergency exit sign

Which statements describe useful properties of a well-designed emergency exit sign?

- A. It remains recognisable at a distance.
- B. It depends entirely on a long sentence.
- C. It uses strong figure-ground contrast.
- D. Its arrow direction is unambiguous.

Q7. Packaging life-cycle

A designer is comparing reusable packaging concepts. Which factors are relevant to a life-cycle evaluation?

- A. Material extraction
- B. Transport weight and volume
- C. Number of realistic reuse cycles
- D. End-of-life recovery

Q8. Area-preserving transformations

Which transformations always preserve the area of a plane figure?

- A. Translation
- B. Rotation
- C. Reflection
- D. Uniform scaling by factor 2

Part B — Subjective

Q13. Sketching — 20 marks

Draw a view from inside a crowded city bus as it stops suddenly. Show at least five people, the interior structure and believable reactions to motion.

Rubric: observation and composition 5; proportion and perspective 5; action and expression 5; clarity and detail 5.

Q14. Design aptitude — 20 marks

Design a compact lunch container for a school student who has limited use of one hand. Show the opening mechanism, compartments, carrying method and how leakage is prevented. Add brief annotations.

Rubric: user understanding 5; functional solution 5; originality 4; communication and annotations 4; feasibility 2.

Answer key

Q	Answer	Q	Answer
1	12	5	A, C, D
2	75	6	A, C, D
3	42	7	A, B, C, D

4	10	8	A, B, C
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Concise explanations

Q1. Exactly two painted faces occur on edge-centre cubes: $12(3-2)=12$.

Q2. Minute hand: 180° ; hour hand: 105° ; difference: 75° .

Q3. Differences are 4, 6, 8, 10, then 12, giving 42.

Q4. Choose the positions of two upward moves among five moves: $C(5,2)=10$.

Q5. A well-designed public drinking-water station should have controls reachable at more than one height (A), sufficient knee and toe clearance for wheelchair users (C), and tactile plus high-contrast instructions (D). Relying on colour alone (B) excludes users with colour-vision deficiency.

Q6. An effective exit sign stays recognisable at a distance (A), uses strong figure-ground contrast (C), and has an unambiguous arrow direction (D). Depending entirely on a long sentence (B) works against quick recognition in an emergency.

Q7. A full life-cycle evaluation considers material extraction (A), transport weight and volume (B), the number of realistic reuse cycles (C), and end-of-life recovery (D) — all four factors are relevant.

Q8. Translation, rotation and reflection are rigid transformations that preserve area (A, B, C). Uniform scaling by a factor of 2 multiplies area by 4, so it does not preserve area — D is excluded.

Southwide — original practice content. Pattern source: uceed.iitb.ac.in (style reference only; not a reproduction of any official paper).