Question 1: What should be the depth of an elevator car with a lifting capacity of 630 kg, if the car width is 1100 mm, to ensure the transportation of a patient on a stretcher?

Question 2: In a 28-meter-tall residential building, the client requests the removal of one of the two elevators for cost savings. There are six apartments per floor. Is it possible to leave one elevator?

Question 3: Is it possible to design a living room without natural light if enhanced artificial lighting and fresh air ventilation are provided?

Question 4: Is it permissible to design a kitchenette without natural light in a one-room apartment, and what ventilation requirements are required?

Question 5: The client requests that the entrance to the residential building be located at -0.450 from ground level, without a ramp, with only a lifting platform. Is this sufficient to ensure accessibility for people with disabilities?

Question 6: The client requires reducing the cross-section of underground parking garage columns from 400x400 mm to 300x300 mm to increase usable space. The building has 16 floors and is made of B30 concrete. Is there a minimum standard cross-section for monolithic columns?

Question 7: In the design of a 9-story residential building, the load-bearing walls are designed using unreinforced brickwork 380 mm thick. The construction area is located in a seismicity zone with a design seismicity of 8 points according to MSK-64.

Is this design solution permissible in terms of the maximum number of storeys and the type of load-bearing structures, in accordance with the requirements of the SP for earthquake-resistant construction? Is it necessary in this case to provide for masonry reinforcement or other structural measures, and what regulations should be considered when making this decision?

Question 8: We are designing a monolithic floor with a span of 8.5 meters. The client requests no intermediate beams; the slab thickness is 200 mm. Is this realistic, or are there regulatory limits on deflection?

Question 9: During an inspection of an existing building, cracks in the beams with an opening width of 0.4 mm were discovered. The building is in normal use. Is this acceptable, or does it need reinforcement?

Question 10: We are designing a pile field for a 12-story building. Geological surveys have shown type II subsidence soil. Can driven piles be used, or are bored piles with widening required?