Protocol for solar thermal energy systems (14.03.2018)

1. Why the sky is blue?
2. Rayleigh scattering. How does it depend on the wavelength?(1/lambda^4)
3. What is the maximum temperature we can get on Earth?
4. Solar concentrators. What types do you know(solar tower and parabolic)? What type of tracking do we use for both of them(solar tower – biaxial for heliostates and parabolic - uniaxial)?
5. Why solar towers are used more now, although the price is higher due to the bitracking?(parabolic mirrors are very difficult to clean)
6. Flat collector. Describe different parts of it. Why do we use glass? From where do we have infrared radiation(from absorber)?
7. F‘ efficiency factor.He showed the formula and ask about the parameters such as distance between the tubes, their diameter. We want less losses (U_l) and higher heat transfer convection coefficient.
8. Which induced systems do you know?
9. How heat pump works? Reverse Carnot process.
10. What fluid do we use in tubes? As we want our pump to work during cold weather we need the fluid which will have low boiling point, such as anti-freeze.