### Task 9. Inverse problems for the systems described by elliptic equations

Consider boundary problems for the systems described by elliptic equations in the set Ω with boundary *S.*

The answer includes the following steps:

1. Write the corresponding optimization problem.
2. Determine the formula for the functional increment.
3. Define the adjoint system.
4. Find the functional derivative.
5. Write the gradient method.

**Variants**

1) 

2) 

3) 

4) 

5) 