**Midterm questions on discipline «Experimental methods for studying nanomaterials and nanostructures»**

1. Nanomaterials based on metals.
2. Technology of nanocrystalline-structured materials obtained through glass-transition of amorphous metallic alloys.
3. Severe plastic deformation (SPD) – technology for bulk nanocrystalline metals and layers.
4. Nanomaterials based on polymers.
5. Polymer nanocomposites of epoxy resin and multiwall carbon nanotubes: processing-structure-properties relationships.
6. Modeling of nanomaterials and nanostructurs.
7. Analytical modeling of nanocomposites stiffness.
8. Continuum approach in nanomechanics.
9. Equilibrium shapes of fluid membranes and carbon nano-structures.
10. Numerical modeling of nanocrystalline metallic materials obtained by glass-transition or severe plastic deformation.
11. Hierarchical modeling of biological nanocomposites.
12. Experimental nano- and micromechanics.
13. Micro- and nanometrology.
14. Mechanical characterization of layers and thin films via nanoindentation and numerical simulations.

**References:**

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