Questions
for modular control work №2 from educational discipline „Engineering geodesy (common course)"

2. Geometric leveling: types of levels. Deaf levels with the level of compensators levels, laser levels.
3. Geometric leveling: main testing optic-mechanical level with level and compensators.
4. Geometric leveling: the process of leveling and field control for this. The main sources of errors in the geometric leveling.
5. Trigonometric leveling: essence, the basic formula, process performance and accuracy of trigonometric leveling over short distances.
6. Trigonometric leveling: essence, the basic configuration process performance and accuracy of trigonometric leveling over long distances.
7. What is geodetic network? What setting and classification of geodetic networks?
8. How built state geodetic networks by the method of triangulation?
9. How built state geodetic networks by the method of trilateration?
10. How built state geodetic networks by the method of polygonometry?
11. How built state geodetic networks by the method of leveling?
12. How built state geodetic networks by the method of a space method?
13. What methods and accuracy of construction of geodetic networks of a rolling?
14. What methods and accuracy of construction of the geodetic surveying networks?
15. What methods and accuracy of construction of the geodetic special networks?
16. How points of geodetic networks fasten on terrain?
17. Kinds and classification of tool topographical surveys of terrain.
18. Essence of theodolite survey of terrain, field and office works.
19. Essence tacheometric survey of terrain, field and office works.

20. Essence of leveling survey of terrain, field and office works.

21. How elements of a situation and a relief give in to topographical surveys?

22. What methods are used for definition of scheduled position of points of terrain at theodolite survey?

23. What methods are used for definition of scheduled position of points of terrain at tacheometric survey?

24. What methods are used for definition of scheduled position of points of terrain at leveling survey?

25. How the plan of theodolite survey of terrain is drawn?

26. How the plan of tacheometric surveys of terrain is drawn?

27. How the plan of leveling surveys of terrain is drawn?

28. For what make tracing-papers of contours and heights at topographical surveys?

30. To determine altitude of an obstacle in a zone of air approaches, if at measurement by theodolite an angle of inclination equals to \( \nu = +1^\circ 10' \), distance to it equals to \( S=500\text{m} \). A altitude of a point of standing by theodolite equals to \( H = 80,1\text{m} \), height of a theodolite equals to \( i =1,50\text{m} \).

31. To determine a altitude of an obstacle in a zone of air approaches, if at measurement by theodolite an angle of inclination equals to \( \nu = +2^\circ 10' \), distance to it equals to \( S=300\text{m} \). A altitude of a point of standing by theodolite equals to \( H = 90,1\text{m} \), height of a theodolite equals to \( i =1,60\text{m} \).

32. To determine coordinates of a point B, if coordinates of point A equals to \( X_A=300,00\text{m}, \ Y_A=200,00\text{m} \), directional angle equals to \( \alpha_{AB}=30^\circ \), horizontal distance equals to \( d_{AB}=100,00\text{m} \).

33. To determine coordinates of a point B, if coordinates of point A equals to \( X_A=400,00\text{m}, \ Y_A=200,00\text{m} \), directional angle equals to \( \alpha_{AB}=60^\circ \), horizontal distance equals to \( d_{AB}=100,00\text{m} \).
34. To determine height and excess between points for way of levelling from the middle when reading on back staff equals to 1335mm, reading on staff on a forward point equals to 2395mm, and its height above initial level surface equals to 100,000m.

35. To determine the horizon of the tool and altitude of a forward point if the altitude of a back point equals to 100,000m, reading on staff on it equals 980mm, and reading on staff on a forward point equals to 1000m.

36. To determine excess between points and altitude of a forward point for a way of levelling "forward" if the altitude of a back point equals to 120m and height of installation of the tool equals to 1308mm, and reading on staff equals to 1266mm.

37. To determine inaccessible distance through the river from a point 1 in a point 3 if the length of the basis located on coast equals to \( b_{1,2} = 100 \)m, and value of horizontal angles at it equals to \( \beta_1 = 30^\circ \) i \( \beta_2 = 60^\circ \).

38. To determine inaccessible distance through the river from a point 1 in a point 3 if the length of the basis located on coast equals to \( b_{1,2} = 100 \)m, and value of horizontal angles at it equals to \( \beta_1 = 45^\circ \) i \( \beta_2 = 60^\circ \).

39. To determine inaccessible distance through the river from a point 1 in a point 3 if the length of the basis located on coast equals to \( b_{1,2} = 100 \)m, and value of horizontal angles at it equals to \( \beta_1 = 30^\circ \) i \( \beta_2 = 45^\circ \).

40. To determine elevation of point tacheometric survey, if elevation of tacheometric station equals to \( H_{st} = 50,12 \) m, measured horizontal distance from station to point by tacheometric range-finder equals to \( d = 100,2 \) m, and the angle of slope equals to \( \nu = +2^\circ 10' \) for height of sighting on staff \( \upsilon = 2,00 \) m. The height of set in of theodolite-tachymeter above tacheometric station equals to \( i = 1,50 \) m.

41. To determine elevation of point tacheometric survey, if elevation of tacheometric station equals to \( H_{st} = 60,42 \) m, measured horizontal distance from station to point by tacheometric range-finder equals to \( d = 101,0 \) m, and the angle of slope equals to \( \nu = -1^\circ 20' \) for height of sighting on staff equals to \( \upsilon = 0,50 \) m. The height of set in of theodolite-tachymeter above tacheometric station equals to \( i = 1,40 \) m.

42. To determine elevation of point tacheometric survey, if elevation of tacheometric station equals to \( H_{st} = 50,22 \) m, measured slope distance from station to point by tacheometric stadia transit equals to \( d = 101,0 \) m, and the angle of slope equals to \( \nu = +2^\circ 10' \) for height of sighting on staff \( \upsilon = 2,00 \) m. The height of set in of theodolite-tachymeter above tacheometric station equals to \( i = 1,50 \) m.
43. To determine elevation of point tacheometric survey, if elevation of tacheometric station equals to $H_{st}=60.34\text{m}$, measured slope distance from station to point by tacheometric stadia transit equals to $d=110.2\text{m}$, and the angle of slope equals to $\nu= -1^{\circ}40'$ for height of sighting on staff $\nu=2.50 \text{ m}$. The height of set in of theodolite-tachymeter above tacheometric station equals to $i=1.50 \text{ m}$.

44. To determine elevation of point leveling survey by horizon of tool, if elevation of initial point equals to $H_{i.p.}=100,000\text{m}$, the staff readings on initial point equals to $a=1250\text{mm}$, and the staff readings on surveying point equals to $a=1300\text{mm}$.

45. To determine elevation of point leveling survey by horizon of tool, if elevation of initial point equals to $H_{i.p.}=50,000\text{m}$, the staff readings on initial point equals to $a=1450\text{mm}$, and the staff read