

**EXAMINATION QUESTIONS FOR APPLICANTS TO DOCTORAL STUDIES IN THE  
PROFILE OF THE GROUP OF THE EDUCATIONAL PROGRAM 8D07208 –  
GEOLOGY AND EXPLORATION OF MINERAL DEPOSITS**

**LEVEL 1 QUESTIONS:**

1. Brief geological characteristics of the area.
2. Confirm the density of the reconnaissance line.
3. Evaluate the stages of exploration, their responsibility for hydrocarbon deposits.
4. Evaluate the mineral testing during exploration.
5. Discuss the tectonics of the Bozachi arc.
6. Evaluate the criteria of geological, economic and technological assessment.
7. Conduct geochemical and mineralogical studies.
8. Discuss the geology of the summer depression
9. Interrelation of sections of the Jurassic productive strata of the Zhetybai and Uzen deposits.
10. Connection to the tectonics of the Zhetybai-Uzen monocline.
11. To substantiate the geological and statistical criteria for determining deposits.
12. Evaluate the classification of deposits according to the degree of study and complexity of the geological structure.
13. Prove the drift of continents and mobility.
14. To substantiate the physical properties and degree of carbonate content of Jurassic sandy loam reservoirs along the horizon.
- 15 Objectives and principles of intelligence.
16. Stages of exploration, their tasks.
17. Technical means of reconnaissance.
18. Additional exploration of the field under development
19. Detailed geological mapping
20. Discuss the geology of the Zhazgurla depression.

**LEVEL 2 QUESTIONS:**

1. Geophysical research in wells
2. Geochemical studies in the exploration of deposits
3. Orientation, shape and density of the exploration network
4. Principles of successive approximations and selective detail.
5. The density of the exploration network.
6. Testing of minerals during exploration.
7. Classification of reserves and forecast resources
8. Forecast mineral resources.
9. Deposits of solid minerals are divided into
- 10 Economic and technological criteria.
11. Basic inventory calculation methods
12. Technological evaluation criteria
13. According to the complexity of the geological structure and characteristics of reservoirs.
14. Geological and economic criteria for the delineation of reserves.
15. Determination of the initial data for the calculation of stocks
16. Group of mining and drilling systems
17. Geophysical research in mine workings and wells.
18. Geochemical and mineralogical studies.
19. Sequence of drilling exploration wells
20. Types of testing and sampling methods.

### **LEVEL 3 QUESTIONS:**

1. Description of the tectonic structure of the South Mangyshlak depression.
2. Discuss the tectonics of the Southern Mangyshlak.
3. Connect the structures of the southwestern part of Southern Mangyshlak (the area of Cape Sandy - Kaundinskaya depression).
4. Justify the profile of the Southern Mangyshlak.
5. Select a river gas and oil field.
6. Description of the river stratigraphy.
7. Description of the amount of oil and gas in the river.
8. Discuss the types of product layers.
9. To substantiate the methods of radiometric reconnaissance.
10. Establish the foundation of the Northern Ustyurt.
11. Discuss the oil and gas potential of the Northern Karakia basin.
12. The tectonic scheme of the Mesozoic deposits of the Northern Mangyshlak.
13. Description of the stratigraphy.
14. Discuss the tectonics of depression in the press.
15. Find a solution for the types of analysis: chemical, geochemical, geophysical, nuclear physics,
16. Evaluate geophysical surveys in mines and boreholes.
17. Specify the tectonic structure and oil and gas potential of the Northern Mangyshlak.
18. Full reconnaissance, Additional reconnaissance. Discuss operational intelligence.
19. Justify the detailed geological mapping.
20. Discuss the tectonics of the black section.