

JSC « ALT Mukhametzhan Tynyshbayev University»  
Department of "Information and communication technologies"

Questions for citizens entering  
the specialized master's degree in groups of educational programs  
" 7M06127 Information Systems "



**Interview questions**

1. Explain the concept of decision support systems (DSS).
2. What mathematical models are used for decision support?
3. What role does artificial intelligence play in decision support systems?
4. Explain the main components of a neural network.
5. What types of neural networks exist and for what tasks are they designed?
6. How does the process of neural network training work?
7. Explain how search engines work.
8. What ranking algorithms are used in search engines?
9. How are machine learning technologies applied in web search systems?
10. Explain the difference between supervised and unsupervised learning.
11. What machine learning algorithms are most popular and for what tasks are they used?
12. What is a neural network and how is it trained?
13. What are the main security threats to information systems?
14. Explain the concept of risk management in information systems.
15. What methods and tools are used to ensure information security?
16. What are business intelligence systems and what are their main components?
17. Explain the concept of data mining and its application in business intelligence.
18. What forecasting methods are used in business intelligence?
19. Explain the difference between SQL and NoSQL databases. In which cases is it preferable to use each of them?
20. Explain the concept of a relational database and its main components.

**Interview questions** was discussed and received a positive decision at the meeting of the Department of «Information and communication technologies», Protocol No. 8 of April 18, 2024.

Head of the Department «ICT»

D.T. Kassymova

**Interview questions** was reviewed and recommended at the meeting of the Council of the Institute of «Automation and telecommunications», Protocol No. 5 of April 26, 2024.

Chairman of the CI «AT»

A. J. Toygozhinova