

JSC « ALT Mukhametzhan Tynyshbayev University »

Department of "Rolling Stock"

**Questions for foreign citizens entering
doctoral studies in groups of educational programs
"D104 Transport, transport equipment and technologies"**



APPROVE

**Chairman of the ALT University AC
M. Zharmagambetova**

**Decision of the Academic Council of
ALT University**

«__» ____ 2025 year (protocol №__)

Interview questions

1. The main directions of your research activities.
2. Modern and scientifically-based definition of transport equipment.
3. Operation of transport equipment using alternative fuels.
4. The basic structure of the freight car. Purpose of the main structural elements. The main technical characteristics.
5. The basic structure of the passenger car. Purpose of the main structural elements. The main technical characteristics.
6. The basic structure of the locomotive. Purpose of the main structural elements. The main technical characteristics.
7. The basic structure of an electric locomotive. Purpose of the main structural elements. The main technical characteristics.
8. The basic structure of a general-purpose car. Purpose of the main structural elements. Main technical characteristics.
9. Basic design of specialized vehicles. Purpose of the main structural elements. The main technical characteristics.
10. The basic design of machines for the construction of road surfaces. Purpose of the main structural elements. The main technical characteristics.
11. The basic structure of the machines for laying the track grid. Purpose of the main structural elements. The main technical characteristics.
12. The influence of various factors on the controllability of transport equipment (car, road equipment).
13. Numerical methods for solving the equation of motion of a vehicle (train, car, road car).
14. Methods of traction calculations (locomotives, cars, road equipment).
15. The main problems of the transport system and approaches to their solution.
16. Tasks and methods of forecasting scientific and technological progress at various stages of its development.
17. The industry of Kazakhstan, which produces transport equipment, and its role in the development of transport equipment service.
18. Organization of maintenance of transport equipment abroad. Advanced foreign experience in the service of transport equipment.
19. The influence of various factors on the fuel efficiency of transport equipment (locomotive, car, road vehicles).

20. Describe the types of failures of transport equipment on a specific example (car, road car, locomotive, wagon).

Interview questions was discussed and received a positive decision at the meeting of the department «Motor vehicles and life safety», Protocol No. 10 of June 04, 2025.

Acting Head Head of the Department
«Motor vehicles and life safety»



A.E. Toilybayev

Interview questions was discussed and received a positive decision at the meeting of the Department of «Rolling Stock», Protocol No. 10 of June 03, 2025.

Acting Head Head of the Department
« Rolling Stock »



T.O. Chigambayev

Interview questions was reviewed and recommended at the meeting of the Council of the Institute of «Transport Engineering», Protocol No. 6 of June 23, 2025.

Chairman of the CI
«Transport and construction»



Sh.A. Abdreshov