

JSC « ALT Mukhametzhan Tynyshbayev University»

Department of "Rolling Stock"

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



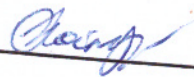
Interview questions

1. What areas of research are you interested in and why?
2. Inventive and patent activities, general concepts and definitions.
3. Features of the design and operation of transport equipment using alternative energy sources.
4. Design features of freight wagons. The main technical and operational characteristics.
5. The design of passenger cars. Type, main elements and technical characteristics.
6. Design features of diesel locomotives. The main technical and operational characteristics.
7. Design features of electric locomotives. The main technical and operational characteristics.
8. The basic design of general purpose vehicles. The main elements of the structure, technical and operational characteristics.
9. Design features of specialized vehicles. The main technical and operational characteristics.
10. Design features of vehicles for road surface construction. The main technical and operational characteristics.
11. Design features of track grid laying machines. The main elements of the structure, technical and operational characteristics.
12. The main factors affecting the controllability of transport equipment (car, tractor, road equipment).
13. The basic equations of motion of a vehicle (train, car, road vehicle). Analytical methods for solving the equation of motion of a vehicle.
14. What are the methods of performing traction calculations (cars, locomotives, road equipment) Do you know?
15. The concept of a transport system, the main problems of the development of transport systems.
16. The basic concepts of scientific and technological progress and its relationship with transport technology.
17. Mechanical engineering of Kazakhstan, its role in the industrial and innovative development of the transport and communication complex.
18. Features of the organization of maintenance of transport equipment. Foreign experience in the maintenance of transport equipment.
19. The concept of fuel efficiency of transport equipment (car, locomotive, road vehicles). The main factors affecting fuel efficiency.

20. The main types of failures of transport equipment (car, road vehicle, locomotive, wagon). Methods of fault detection and repair.

Interview questions was discussed and received a positive decision at the meeting of the department «Motor vehicles and life safety», Protocol No. 9 of May 20, 2024.

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



G.T. Naymanova

Interview questions was discussed and received a positive decision at the meeting of the Department of «Rolling Stock», Protocol No. 9 of May 13, 2024.

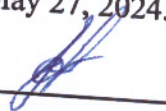
Head of the Department
«Rolling Stock»



G.K. Ashirbayev

Interview questions was reviewed and recommended at the meeting of the Council of the Institute of «Transport Engineering», Protocol No. 5a of May 27, 2024.

Chairman of the CI «Transport Engineering»



Sh.A. Abdreshov