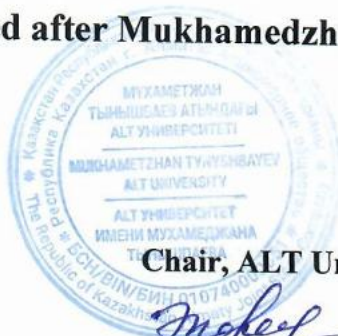


JSC «ALT University named after Mukhamedzhan Tynyshpayev»



APPROVED

Chair, ALT University Academic Council

 **M. S. Zharmagambetova**

**ALT University Academic Council Decision
dated 30 April 2026 (Minutes No. 8)**

PROGRAMME

of the entrance examination for admission to doctoral studies

Educational Programme Group: D210 – Trunk Networks and Infrastructure

Educational Programme: 8D07169 – Transport Infrastructure Engineering

Programme Track: Professional

Almaty 2026

The entrance examination programme was discussed and approved at a meeting of the Department of Transport Construction, Minutes No. 7a dated 20 April 2026.

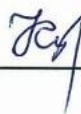
**Acting Head of the Department
of Transport Construction** _____



T. Zh. Tulemissov

The entrance examination programme was endorsed by the Institute of Transport and Construction Council, Minutes No. 8 of 24 April 2026.

**Chair of the Council of the Institute
of Transport and Construction** _____



N. Z. Suleyeva

CONTENTS

1.	Purpose of the entrance examination	4
2.	Entrance examination format and procedure	4
3.	Types and assessment criteria	4
3.1.	Criteria for assessing answers to electronic examination ticket questions	4
3.2.	Interview assessment criteria	5
3.3.	Employer letter of recommendation	5
4.	Content of examination materials	6
4.1.	List of disciplines included in the entrance examination	6
4.2.	Content of the entrance examination blocks	6
4.3.	List of interview questions	7
5.	Recommended reading	8
5.1.	Core literature	8
5.2.	Supplementary literature	9

1. PURPOSE OF THE ENTRANCE EXAMINATION

The purpose of the entrance examination is to determine the level of theoretical and practical preparation of applicants to doctoral studies and assess whether their knowledge and skills meet the requirements of the programme.

The entrance examination for admission to the Doctor of Industry programme consists of the following components:

- 1) an interview with the applicant conducted by the Examination Committee;
- 2) answering examination questions relating to the educational programme group profile;
- 3) submission of a letter of recommendation from an enterprise or organisation.

2. ENTRANCE EXAMINATION FORMAT AND PROCEDURE

The entrance examination lasts 2 hours and 30 minutes, during which the applicant is interviewed and answers an electronic examination ticket comprising 3 questions. The questions are selected at random. The maximum score for the entrance examination is 80 points: 50 points for the educational programme group profile examination and 30 points for the interview.

3. TYPES AND ASSESSMENT CRITERIA

3.1. CRITERIA FOR ASSESSING ANSWERS TO THE ELECTRONIC EXAMINATION TICKET

The educational programme group profile examination comprises 3 question blocks: Question 1 assesses the level and systematic nature of theoretical knowledge; Question 2 assesses the development of functional competencies; and Question 3 assesses systemic competencies. The maximum score is 50 points.

The electronic examination ticket consists of 3 questions:

Blocks	Nature of the question	Points
Question 1	theoretical – assesses the level and systematic nature of theoretical knowledge	10
Question 2	practical – assesses the development of functional competencies (ability to apply methods, technologies and techniques in the subject area)	20
Question 3	assesses systematic understanding of the subject area and specialised knowledge of research methodology (systemic competencies)	20
Total:		50

Criteria for assessing answers to the electronic examination ticket:

Question	Assessment criteria	Points
Question 1	demonstrates knowledge of core processes in the subject area; depth and completeness of the answer	5
	expresses an original opinion on the issue logically and coherently	3

	demonstrates command of the conceptual framework and scientific terminology	2
	Total:	10
Question 2	applies methods, techniques and technologies to solve problems in the subject area	7
	provides reasoned arguments; compares and classifies phenomena, events and processes; and draws conclusions and generalisations based on practical skills	7
	analyses information from various sources	6
	Total:	20
Question 3	critically analyses and evaluates theoretical and practical developments, scientific concepts and current trends in science	7
	synthesises methodological approaches to interpreting key problems in the subject area	7
	identifies cause-and-effect relationships when analysing processes, phenomena and events	6
	Total:	20
	TOTAL:	50 points

3.2. INTERVIEW ASSESSMENT CRITERIA

N o.	Criteria	Descriptors	Points
1.	Motivation	Rationale for pursuing doctoral studies in the chosen educational programme and enrolling at a particular university. A vision of professional and personal growth prospects upon completion.	5
2	Research competence	Possession of the research skills and experience required for research in a specific subject area.	10
3.	Creativity	Original thinking and creative and alternative approaches to solving problems and case-based tasks.	10
4.	Communication skills	Ability to present one's viewpoint concisely, meaningfully, logically and persuasively; draw generalisations and conclusions; and demonstrate language proficiency.	5
Maximum score:			30

3.3 EMPLOYER LETTER OF RECOMMENDATION

For admission to a professional doctoral programme, the letter of recommendation from an enterprise or organisation must be issued on official letterhead, provide specific information and confirm the company's interest in the applicant's studies.

4. CONTENT OF EXAMINATION MATERIALS

4.1. LIST OF DISCIPLINES INCLUDED IN THE ENTRANCE EXAMINATION

The entrance examination materials for doctoral studies in the D210 – Trunk Networks and Infrastructure educational programme group, including profile examination questions, are provided in three languages: Kazakh, Russian and English.

The examination questions cover selected sections of the curricula prescribed for the D210 – Trunk Networks and Infrastructure educational programme group.

N o.	Discipline titles
1	Organisation and Planning of Research
2	Structure of Transport Infrastructure Facilities
3	Design and Cost Estimating in Transport Construction
4	Innovative Technologies in Transport Construction
5	Diagnostics of Transport Infrastructure Facilities
6	Strengthening Transport Infrastructure Facilities

4.2. CONTENT OF THE ENTRANCE EXAMINATION BLOCKS

Block 1. Design, Construction and Operation of Transport Infrastructure Facilities

Section content:

- engineering surveys for transport infrastructure facilities;
- fundamentals of transport infrastructure facility design;
- construction technologies for transport infrastructure facilities;
- organisational principles of transport infrastructure facility construction;
- fundamentals of routine maintenance of transport infrastructure facilities;
- fundamentals of major repair of transport infrastructure facilities;
- fundamentals of transport infrastructure facility reconstruction;
- reliability, durability and safety of transport infrastructure facilities;
- diagnostics of transport infrastructure facilities;
- regulatory and technical support for the design, construction and operation of transport infrastructure.

Block 2. Materials and Innovative Technologies Used in Transport Infrastructure Facilities

Section content:

- modern construction materials for transport infrastructure facilities;
- railway track materials;
- materials for roads and airfield pavements;
- materials for linear pipelines;
- materials for transport engineering structures;
- protection of construction materials and structures against operational effects;
- quality control of materials and construction work at transport infrastructure facilities;
- construction material testing methods;