

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
NATIONAL TECHNICAL
UNIVERSITY "KHARKIV POLYTECHNIC INSTITUTE"

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|---------------------|---|
| Pulpit | Electric stations |
| Speciality | 141 "Electric power engineering, electrical engineering and electromechanics" |
| Educational program | Electricity 141-01 "Electric stations" |
| Form of study | Part-time |
| Academic discipline | Energy Storage Systems and Maneuvering at the Power Grid |
| Semester | 9 |

**LIST OF QUESTIONS AND TASKS INCLUDED IN EXAM TICKETS IN
THE DISCIPLINE**

Number of tickets _____

Approved at the meeting of the
Department
minutes No. 20

Zav. Department

_____ Oleksandr LAZURENKO

Examiner

_____ Andriy IIVAKHNOV

- The concept of balance in the electric power system, to give all components.
- The concept of maneuvering in the electric power system, to give maneuvering characteristics of different types of power plants.
 - Shunting capabilities of TPP and NPP, to give similar and distinctive features.
 - The shunting capabilities of the hydroelectric power complex and the GTU bring similar and distinctive features.
 - Features of GTU.
 - Types of storage technologies.
 - Mechanical drives of electricity.
 - Electrochemical power storages.
 - Electromagnetic power drives.
 - Principles of hybrid combination of electricity storages.
 - The use of electricity storages in the power system.
 - Causes of balance violation in the electricity system.