

Questions for the state final exam

Master study programme N0715A270009 – Industrial Engineering,
academic year 2022/2023

RATIONALIZATION OF PRODUCTION AND INNOVATION MANAGEMENT

1. The mission of rationalization, definitions, basic concepts.
2. Study of work organization systems, analyzes, sources of information for rationalization.
3. Time course of the production process, production cycle, its determination, evaluation, analysis.
4. Classification of rationalization methods and techniques.
5. Operational research and value analysis.
6. Standardization of assembly, auxiliary and service work, maintenance – movement standards.
7. Ergonomic aspects in the rationalization of the production system.
8. Methods and techniques to support top management.
9. Methods, techniques, and tools for effective production management, analysis, and measurement of work.
10. Methods, techniques, and tools for efficient administration in the production system.
11. Methods, techniques, and tools for information management. The use of computer technology in streamlining the production system.
12. Methods, techniques, and tools for working with quality.
13. Cluster. Definition, subjects, goals, arrangement, benefits.

14. Innovation – process, types, life cycle. Innovation Strategy of the Czech Republic 2019–2030.
15. Innovation centers and science and technology parks. Definition, classification, mission. Start-up. Innovative business. Elements of the company's competitiveness.
16. Technology transfer – importance, transfer centers, technology transfer in the Czech Republic. Technology market and the invention market.
17. The legal instruments of technology transfer – Letter of Intent, Memorandum of Understanding, Confidentiality Agreement, Research Agreement, Option Agreements, License Agreement.
18. Process management of an organization. Definition, development, need for change (customers, competition, change). Process-driven organizations. Concepts (roles, process, SLA), basic structures of the general roles.
19. Business processes. Hierarchy, classification. Business HUB.
20. SMART Industry 4.0.