
Pytania na egzamin dyplomowy magisterski na kierunku „Quality and Production Management” studia stacjonarne/niestacjonarne II stopnia Rok akademicki 2021/2022

1. The concept, tasks and objectives of internal audit.
2. Technological audit stages, technological audit as an aid in the implementation of Industry 4.0.
3. Basic concepts in the area of Industry 4.0, Singularity, Artificial Intelligence, Internet of Things, Full Integration, Augmented Reality.
4. Differences between successive industrial revolutions.
5. Discussion of the principles of planning and organization of processes in accordance with the assumptions of Lean Production.
6. Techniques for visualizing processes and their flows: technological approach, logical map, flow chart, etc.
7. Improving processes and the flow of value streams based on big picture analysis.
8. Measures and indicators according to TOC. Basic TOC meters.
9. Production control by the DBR method. Differences between DBR, traditional approach and LEAN approach.
10. The concept of the production system. Division of the production and manufacturing system.
11. The Suzuki ABCD method.
12. Quick Kaizen method.
13. Lean Manufacturing (LM) and World Class Manufacturing (WCM) – a comparison of the two most important manufacturing strategies of recent times.
14. Methods of Shainin's planning experiments.

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15. Definition of Quality 4.0. Quality 4.0 and traditional quality. The evolution of quality to Quality 4.0.
 16. Conducting a process risk analysis according to the FMEA.
 17. The Pugh matrix as a tool for choosing the best solution.
 18. Quality regression analysis. Use of a regression control chart for prediction.
 19. The benefits, advantages and disadvantages of e-commerce.
 20. Methods of methods of service quality assessment with an emphasis on e-commerce.
 21. The Kano model as an instrument for the development and management of products and services in the digital economy.
 22. Role of sustainability in supply chain management.
 23. Impact of the 4th Industrial revolution on supply chain.
 24. Methods of coordinate measurement technique in reverse engineering.
 25. 3D scanning as a reverse engineering tool.
 26. Digitization methods used in reverse engineering.
 27. The importance of interpersonal skills in manager's work.
 28. Types of conflicts. C. Moore's Circle of Conflict.
 29. Modern methods of visual inspection.
 30. The essence, goals, functions and tasks of quality control.
 31. Solving quality problems using the 8D method.
 32. Elements of quality control in industry 4.0.
 33. Trademarks: concept, functions, types, subject of protection law.
 34. Stages in the modeling and simulation process.
 35. Advantages and disadvantages of using simulation models.
 36. Data flow, concepts of building models in FlexSim.
 37. Strategies of pull and push control, programming of objects, among others processor, separator, combainer, multiprocessor, belt conveyor, robot, task executer in the FlexSim environment.
 38. Measurement errors. Classification of modern measuring instruments.
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39. Classical measuring instruments and measuring procedures with their use.
 40. Typical errors of computer measurement techniques.
 41. Network approach in contemporary management.
 42. Threats, division, types, characteristics - possibilities to avoid threats and protect employees.
 43. Data and information security management.
 44. Creating innovations based on the Design Thinking method.
 45. Factors driving and inhibiting the process of creative problem solving.
 46. Basic types of innovation and models of innovative processes.
 47. Business models in industry 4.0.
 48. Technologies of Rapid Prototyping.
 49. Examples of RP and RT application in different manufacturing technologies.
 50. Forms and barriers of technology transfer.