Exam questions

Theory of linear systems of automatic regulation and control

1. The main characteristics of the links of automatic systems
2. Equations of links and types of basic characteristics
3. Types of positional links and their characteristics
4. Types of integrating and differentiating links and their characteristics
5. Othertypesoflinks
6. The main characteristics of automatic control systems
7. Transfer functions and open link characteristics
8. Structuraltransformations
9. Transfer functions and equations of a closed system
10. Frequency characteristics of a closed system
11. Accuracy and sensitivity of automatic control systems
12. Managementprocessandrequirements
13. Permanenterrors. Astaticsystems
14. Accuracyinharmoniceffects
15. The established error at an arbitrary exposure (error rates)
16. Sensitivityofautomaticsystems
17. Stability of automatic control systems
18. The concept of stability of linearized systems
19. Algebraicstabilitycriteria
20. The stability criterion of Mikhailov. Building sustainability areas
21. Frequency criterion for Nyquist stability
22. Transitionalqualityassessments
23. Quality requirements and communication with frequency characteristics
24. Frequencyqualityassessments
25. Rootqualityassessments
26. Integratedqualityassessments
27. Corrective devices and methods for their synthesis
28. SerialCorrectiveDevices
29. Parallelcorrectiondevices
30. Corrective devices for external exposure. Invariance
31. Frequency method for the synthesis of corrective devices
32. Roothodographmethod
33. The state space method in control theory
34. System equations and its correction in the state space
35. The direct root method of synthesis of dominant type control systems.
36. Examples of a direct root synthesis method of another type
37. The program of the root method for the synthesis of corrective circuits
38. Multidimensional systems. Manageability and Observability
39. Features of multidimensional automatic control systems.
40. Thestudyofmultidimensionalsystems
41. Frequency methods for multidimensional systems
42. The concept of controllability and observability of systems
43. Estimating the coordinates of the state of systems
44. Linear automatic control systems of other types
45. Systems with delay. Distributed Parameter Systems
46. ​​Systemswithvariableparameters
47. Discretesystems
48. Pulseautomaticcontrolsystems
49. Equationsandtransferfunctions
50. Frequency characteristics of pulse systems
51. Logarithmicfrequencycharacteristics
52. Stabilityofimpulsesystems
53. Accuracy and correction of impulse systems