MASTER'S DEGREE EXAMINATION
Study major: Economics

1. Why are small and shallow markets inefficient?
2. Economic growth according to Solow-Swan.
3. Describe rational preferences. Do you know any examples of preferences that are not rational?
4. What are the possible forms of disbursing retirement pension? Please describe them and determine the costs related to them and their risks.
5. Stability of the steady state (stationary point): definition and characteristics.
6. Utility as a function representing preferences. Describe the features with a reference to axioms of preference relations.
7. Institutional determinants of development.
8. Economic growth in the Ramsey-Cass-Koopmans model.
9. Utility maximisation problem. Present the structure of the problem and its solution.
10. Enumerate the differences between tax-based financing and contribution-based financing of the retirement scheme. Advantages and disadvantages of both forms of financing nowadays and in the past.
11. Types of steady states for linear systems on a plane.
12. Indirect utility function: definition and applications.
13. Social capital vs. conditions and efficiency of management.
14. Fiscal policy in the Ramsey-Cass-Koopmans model.
15. Substitution and income effect of changes in commodity prices. Define the terms based on the Slutsky equation.
16. What is a hidden debt? What is known about its scale (how to determine it)? How does it affect economy (long and short-term horizon)?
17. What role is played by the steady state and the sustainable growth path in the modelling of economy dynamics?
18. Expense minimisation problem and Hicks demand.
19. Theory of dependent capitalism.
20. Models of endogenous economic growth.
21. Compensated income change vs. law of demand.
22. What external effects may be related to the existence of a retirement scheme? What are they in the case of a universal one and in the case of a supplementary one? How do they differ when the scheme uses the financial markets and when it does not?
23. Methods of finding the local maximum in dynamic problems with discrete time.
24. Using the consumer choice model compare the operation of the substitution and the income effect in the case of growth of price of an ordinary good and a Giffen good.
25. Cultural factors vs. development dynamics.
26. Comparison of endogenous and exogenous growth models.
27. What are revealed preferences? Which premises does the micro-economic analysis with their use rely on?
28. What does the replacement rate in the universal retirement scheme depend on? Can it (and in which degree) be influenced?
29. Formulation and application of the backwards induction method in inter-period optimisation.
30. Discuss the concept of aggregate demand. What simplifying premises are adopted whilst constructing aggregate demand and what are their consequences?
31. Institutional change. Mechanisms responsible for institutional rigidity.
32. Overlapping generations models and their application to analysis of macro-economic politics.
33. Von Neumann-Morgernstern expected utility theory in consumer selection. Key axioms and their consequences.

34. Enumerate differences between allocation of income in a life cycle (with a retirement objective) as part of a scheme covering everybody on uniform principles (universal scheme) and supplementary saving schemes offering freedom of choice.
35. Bellman's principle of optimality: definition and applications.
36. Measures of aversion to risk in the economic consumer choice model.
37. Collective action problem and the Big Push theory.
38. Investment determinants in economic theory: theoretical models.
39. Paradoxes of expected utility. Discuss them in the context of the independence axiom.
40. What does the neutrality of the retirement scheme on the macro-level consist in? What does neutrality on the individual level consist in?
41. Compactness of sets and continuity of functions vs. existence of solutions of optimisation problems.
42. Subjective expected utility. Discuss the term and its applications.
43. Complementarity of development conditions and the idea of weakest link vs. the O-ring theory.
44. Public debt and the level of real production in short and long-term perspective.
45. What are the differences between the context of decision making in the conditions of risk and the context of decision making in the conditions of uncertainty? What are the theories of decision-making in the conditions of uncertainty?
46. Enumerate basic differences and similarities between a system using financial markets and a system not using them.
47. Why is discounting factor usually taken into account in economic models with inter-period optimisation?
48. What is the difference between the theory of expected utility and the prospect theory in the context of decision making in risk conditions?
49. Income inequalities vs. development.
50. Macro-economic consequences of nominal price and wage rigidity.
51. Define the cost function and discuss its properties.
52. Enumerate effects: economic, social, budgetary and other of a change in the level of retirement age.
53. Methods of solving problems in inter-period optimisation with a finite and infinite planning horizon.
54. Path dependence: the clarifying role of history in economy.
55. Macroeconomic consequences of dynamic inconsistency of macro-economic policies.
56. Enumerate and discuss justification for the existence of a retirement scheme covering everybody on the same principles (a universal scheme).
57. Control variables and state variables in dynamic optimisation models.
58. Measures of social development level.
59. Money demand models (money in the utility, cash-in-advance).
60. The economy of scale concept. What do the growing, constant or decreasing economies of scale in the company production result from?
61. What is the difference between the rate of return in non-financial defined contribution (NDC) and the rate of return in financial defined contribution (FDC)?
62. Explain what the precision (variance) of the least square method estimator assessments depends on.
63. Malthusian population principle.
64. Real costs of de-inflation according to various macro-economic schools (monetarism, new classic economics).
65. What is a demographic dividend? In which conditions can it be positive?
66. What is the Pareto optimal? Provide its definition and characteristics.
67. Explain the issue of endogeneity of explanatory variables. Enumerate and explain the most frequent causes of endogeneity and present its consequences.

68. Kremer's population theory.
69. Comparison of major theses of the new classic economics and new Keynesian economics.
70. Optimal Pareto allocations vs. maximisation of the social objective function. Discuss the dependencies.
71. Use of financial markets to allocate income in a life-cycle (in a retirement scheme). Advantages, disadvantages, external effects, distribution of risk, rates of return.
72. Explain the problem of heteroskedasticity of the disturbance term. List the cause and the consequences of this phenomenon.
73. Hypothesis of unconditional convergence vs. hypothesis of conditional convergence.
74. Comparison of the theory of a real business cycle with New Keynesian fluctuation models.
75. Walrasian equilibrium in economy. Definitions and interpretation.
76. How can the amount of retirement pension be measured? What is the difference between various modes of measuring? What does the amount of retirement pension in every model depend on and what can it be affected by?
77. Explain the problem of autocorrelation of the disturbance term. List the cause and the consequences of this phenomenon.
78. Rostov's theory of stages of economic growth.
79. Money-based business cycle theory: efficiency of expansive monetary policy.
80. Characterise the Walrasian equilibrium with the use of necessities (the so-called first order conditions).
81. A demographic transition and its impact on the functioning of retirement schemes.
82. Explain the problem of co-linearity of explanatory variables and list the causes and the consequences of this phenomenon.
83. Globalisation vs. opportunities and development conditions of underdeveloped areas.
84. Based on various models, explain the micro-economic bases of rigidity of prices and wages.
85. First theorem of welfare economics. Assumptions and implications.
86. Discuss the properties of the least square method estimator.
87. Environmental Kuznets curve.
88. Exogeneity and endogeneity of money in economic theory.
89. Second theorem of welfare economics. Assumptions and implications.
90. Enumerate and explain the most frequent modes of taking the problem of heteroskedasticity of the disturbance term into account.
91. Goal of management in major economic theories.
92. Consumption in the conditions of uncertainty.
93. Discuss the conditions of existence of Walrasian equilibrium in economy.
94. Enumerate and explain the most frequent modes of taking the problem of autocorrelation of the disturbance term into account.
95. Economic protectionism: a discussion.
96. Mundell-Fleming model: budgetary policy and monetary policy.
97. Explain how to test empirical economic hypotheses, both simple and complex.
98. Natural resources and the Dutch disease.
99. Liquidity trap: monetary accommodation of fiscal expansion.
100. Discuss the premises of the logit model and the manner in which the parameters of the logit model may be interpreted.

Literature:

1. R. Bartkowiak: *Ekonomia rozwoju*, PWE, Warszawa 2013;
2. M. Garbicz: *Problemy rozwoju i zacofania ekonomicznego*, Wolters Kluwers, Warszawa 2012;
3. Wickens M., Microeconomic Theory. A Dynamic General Equilibrium Approach. Princeton University Press, 2008;
4. Romer D. Makroekonomia dla zaawansowanych, PWN, Warszawa 2001;

5. Mas-Collel, A., Whinston, M., Green, J. (1995), Microeconomic Theory. Oxford University Press;
6. Kreps, D. (2013), Microeconomic Foundations I: Choice and Competitive Markets, Princeton University Press;
7. Laidler, D., Estrin, S. (1991), Wstęp do mikroekonomii, Gebethner;
8. Czarny, E. , Nojszewska E. (2000), Mikroekonomia, PWE;
9. N. Barr, P. Diamond, Reforming Pensions, Principles and Policy Choices, Oxford University Press, 2008; D. Blake, Pension Economics, John Wiley&Sons, 2006;
10. D. Blake, 2006. Pension Economics. John Wiley&Sons;
11. M. Góra, 2003. System Emerytalny. PWE;
12. A.C. Chiang, Podstawy ekonomii matematycznej, PWE, 1994;
13. A.C. Chiang, Elementy dynamicznej optymalizacji, Elipsa, 2002;
14. G. Klima (2005), Programowanie dynamiczne i modele rekursywne w ekonomii. „Materiały i studia NBP", zeszyt nr 201. Dostępne na http://www.nbp.pl/publikacje/materialy_i_studia/ms201.pdf;
15. K. Sydseater, P. Hammond, A. Seierstad, A. Strom, Further mathematics for economic analysis, Prentice Hall, 2008;
16. W. H. Fleming, R. W. Rishel, Deterministic and stochastic optimal control, Springer, 1975;
17. K. Waelde (2011), Applied Intertemporal Optimization, http://ideas.repec.org/b/gla/glabks/econ1.html
18. M. Gruszczyński, T. Kuszewski, M. Podgórska (red.), Ekonometria i badania operacyjne, Wydawnictwo Naukowe PWN, Warszawa;
19. Hall R. C., Griffiths W. E., Lim G. C., Principles of Econometrics, Wiley;
20. Pesaran M. H., Time Series and Panel Data Econometrics, Oxford University Press;
21. Wooldridge J. M., Econometric Analysis of Cross Section and Panel Data, the MIT Press;
22. Wooldridge J. M., Introductory Econometrics: A Modern Approach, Cengage Learning.