GENERAL THESES

1. Basic terms in geography. Interpretation of space, place, time-space convergence, sense of place, location (absolute, relative), distance. Different geographical boundaries: landscape and environment, watersheds, catchments, impact areas (pollution) and administrative, political boundaries. Manipulation of boundaries.

2. Main stages in the development of geography as a discipline. Environmental determinism, possibilism, and nihilism. The relevance of 'location theories', the 'quantitative revolution' and 'social geography'. The role of critical, radical and gender geographies answering the problems of contemporary postmodern societies.

3. Spatial distribution of the world economy and population. The world system theory, core-periphery relations. The process of spatial concentration. Agglomeration economies. Localization vs. urbanization economies.

4. Movement and flow in space. Forms of migration, triggering factors and explanations. Historical and contemporary patterns of migration. Different forms of diffusion. Distance-decay model. The nearness principle.

5. Urban growth, and regional trends. Overurbanization, mega-cities, squatting. Differences of formal and informal urbanization. Cycles of urbanization and their explanations.

6. Main principles of a successful regional development (golden rules). Conflicts between micro- and macro-scale development actions, and possible conflicts among major target groups. Challenges of regional policy in the era of globalisation. Milestones of the changing regional policy of the EU.

7. The history and background of globalization: ideology, infrastructure and the role of transnational corporations. The political, social, cultural and economic consequences of globalization. World cities. Measurement of globalization. Answers to globalisation.

8. State as a geographical construct. Nation-states. Ethnic geography. The importance of different scales in ethnic geography. The application of social geography in ethnic researches. Describe some case studies of Hungarian social geography. Which are the main questions, methods and problems of these researches?

9. Most important issues related to the use of surface and subsurface fresh water resources. How climate change and human overuse affect the quantity and quality of these resources? Characterize river catchments with a system approach and describe connections within the system.

10. The role of GIS in environmental and social geographical applications. Describe the data structures, different scales and projections. Explain the advantages of using geoinformatic models in solving geographical problems. Contribution of information technology to environmental risk assessment/disaster management.

11. Environmental databases on global and local scales based on primary and secondary data. Methods of primary and secondary data acquisition. Definition of the key aspects of data quality, resolutions, geometrical and thematical accuracy.

12. Main characteristics and types of environmental systems. The main purpose of modelling, the types of models. Describe the carbon cycle model and its environmental issues. What are the most important biogeochemical cycles, and how they are affected by human activity?

13. Sensitivity in physical geography (disturbing factors, responses, resistivity) and the elements of resistance/resistivity analysis. Definitions of risk, major types of natural and technological hazards/disasters. Main goals of environmental risk assessment, risk assessment methods, determination of the acceptable risk.

14. Definition of landscape, the main characteristics of landscape structures. Identification of land use conflicts in agricultural landscapes, and peri-urban environment, their connection to soil and water quality. Environmental problems related to land cover/land use changes. Describe an example of land use optimization. Role of ecosystem services.

15. Landscape ecology and landscape planning. The structural plans and regulation plans as a tool of landscape planning (theoretical background and some examples). The environmental and landscape ecological consequences of road network planning. Problems, and solutions.

SPECIALIZATION LANDSCAPE AND ENVIRONMENTAL MANAGEMENT

1. Significance of urban green infrastructure. Describe the factors related to the modifying microclimate, water balance, air pollution. Provide green infrastructure planning tools to different urban challenges.

2. Ecological background and methodological approaches (habitat classifications, field techniques).

3. Theoretical background and practical aspects of environmental planning. Spatial and process models in environmental planning.

4. Characterize the channel pattern and floodplain forms. Specify the direct and indirect human impacts on rivers, river morphology, sediment quantity and quality. River and floodplain restoration.

5. Describe the goal and scope structure of project management. Introduce the process of budgeting and cost analysis with the most common project cost-types. Introduce the project organization types and the personal and non-personal limitations. Describe an example of projects.

6. Present data/variable types by level of measurement, and discuss their relevance in statistics (nominal, ordinal, interval, ratio). Measurement of spatial inequality and

spatial concentration (Dual Index, Concentration Index, Hoover Index, Lorenz Curve, Gini).

7. Explain the meaning of correlation and spatial autocorrelation, and their relevance in regional statistics.

8. The general requirements for environmental monitoring systems; define the elements of them. Give some examples of surface water, groundwater, soil, and air quality monitoring. Role of remote sensing in monitoring system.

SPECIALIZATION REGIONAL AND URBAN DEVELOPMENT

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2. Ecological background and methodological approaches (habitat classifications, field techniques).

3. Theoretical background and practical aspects of environmental planning. Spatial and process models in environmental planning.

4. Characterize the channel pattern and floodplain forms. Specify the direct and indirect human impacts on rivers, river morphology, sediment quantity and quality. River and floodplain restoration.

5. Describe the goal and scope structure of project management. Introduce the process of budgeting and cost analysis with the most common project cost-types. Introduce the project organization types and the personal and non-personal limitations. Describe an example of projects.

6. Definition of a city. Theories of urban origins. The development of pre-modern cities. Industrial revolution and the modern city. Origins of systematic urban planning.

7. The spatial structure of cities. Bid-rent and urban land use. Social structure of cities, segregation. Urban decay and deprivation. Urban regeneration and gentrification.

8. Metropolitan regions, urban sprawl, conurbation. Planning of metropolitan regions. Polycentric urban development.

9. How can the concept of the ’rural’ be defined? What kind of global rural development problems and challenges exist? What is the importance and role of rural society in rural development?

10. The history of urban and regional planning, from the late nineteenth century up to the early 21st century. Main approaches and paradigms in spatial planning. What is the role

of geographical scale in spatial planning? Types and planning practices that can be implemented at different scales.