

THE SET OF QUESTIONS ON THE M.SC. EXAM

field of study II level: TECHNOLOGIA CHEMICZNA

speciality: Sustainable Fuels Economy

1. What is the range of white, blue, red and green biotechnology?
2. Describe in general the process of biological water treatment.
3. Explain the matter of fermentation phenomena.
4. Describe in general types of solid fuels, especially coal in accordance to coalification degree.
5. Outline the degasification process.
6. What is volatile matter of coal.
7. Clean coal technologies
8. Methods of modelling: Mathematical programming, Systems dynamics, Econometrics.
9. Electrical load profile, load duration curve, residual load.
10. General market structures.
11. Key objectives of the global and EU energy policy.
12. Energy policy instruments.
13. Electricity and capacity markets.
14. EU Emissions Trading System (ETS).
15. Electricity price formation.
16. Relations energy – environment – economics.
17. Extrernalities of energy production.
18. Business plan and business model.
19. Value Proposition and Unique Selling Point.
20. Methods for Systematic Inventive Thinking.
21. Static and dynamic methods for economic evaluation of Investment projects.
22. Leadership theories and approaches.
23. Team building and management.
24. Discuss the difference between short-term and long-term marginal costs of electricity generation.
25. Explain market equilibrium.

26. What are the most important economic instruments for reducing emissions?

27. Evaluate the impact of power generation on air quality.

28. Atmospheric pollutant transport modeling systems – division, application, input and output data.

29. United Nation Framework Convention on Climate change and its main Protocols.