

MASTER EXAM QUESTIONS 2020/2021

major: IT MANAGEMENT

- 1. Describe the ISO/OSI model and its impact on the development of telecommunication networks.**
- 2. What is the network protocol, and what is its purpose in the telecommunication networks? Give an example.**
- 3. Name and briefly characterise the devices used in computer networks.**
- 4. Describe physical media used in the telecommunication networks.**
- 5. How is the computer identified in the network? Is the number of computers on the Internet limited? Explain.**
- 6. Describe the selected service delivered to the clients on the Internet. What are its purpose and impact?**
- 7. What is Web 2.0, and why is it so important for the development societies?**
- 8. Briefly characterise the data warehouse. What is the difference between the data warehouse and the database?**
- 9. Describe the ETL approach for the input data processing in the data warehouse.**
- 10. What is the cube used for in data warehouse? How many dimensions should it have and why?**
- 11. Define the data governance and data management. What is the difference between them?**
- 12. Describe the star schema and explain, why is it used in the data warehouse.**
- 13. Specify the components of Soft Computing techniques.**
- 14. Distinguish between Fuzzy and Probability theory.**
- 15. Explain the fuzzy control system, give one example.**
- 16. What is the difference between Classification and Regression in Machine Learning?**
- 17. What is the concept of Artificial Neural Networks?**
- 18. Describe any of useful software libraries for Data Science or Machine Learning.**
- 19. What is the reducible error and the irreducible error associated with a prediction of a response variable?**
- 20. What is the training data overfitting? What are its negative consequences?**
- 21. What is the Principal Component Analysis? What is it used for?**
- 22. What is the difference between the linear regression and the logistic regression?**
- 23. What is an outlier in data? What can be the cause of the outliers? How can the outliers be identified?**
- 24. Explain the competence of the Data Scientist. Why is this job so important today?**
- 25. Describe the Big Data methodology. What are challenges related to it?**