Modele de subiecte pentru examenul de licență

la programul de studii Informatică (în limba engleză)

1. *What is the difference between alternate and repetitive instructions? Give the examples in C # or Java.*
2. *What is a relational SGBD? What types of relationships do you know?*
3. *Describe an algorithm for sorting values in a vector.*
4. *What is the measure unit for information?*
5. *Describe the binary search algorithm for a value in a vector.*
6. *List at least 5 SQL commands and explain their role.*
7. *What is the role of constructors class? What other basic fields can find in a class?*
8. *What do you mean by information security on the Internet? Give examples of methods to ensure information security.*
9. *What is an object in OOP programming?*
10. *Describe the encryption principles using symmetric algorithms and asymmetric algorithms.*
11. *Give some examples of advantages and disadvantages in the utilisation of dynamic allocation of vectors or lists for data storage.*
12. *What are the main MS Access objects? Explain their role.*
13. *Describe, briefly, the Divide et Impera programming technique and give an example of a problem that can be solved using this technique.*
14. *What is Electronic Signature? Give an example of use.*
15. *Describe, briefly, the Backtracking programming technique and give an example of a problem that can be solved using this technique.*
16. *How to instantiate an object in C # or JAVA?*
17. *Describe briefly the concept of recursiveness.*
18. *What are the Artificial Intelligence? Give the examples of their applications.*
19. *Explain briefly the concept of inheritance from object-oriented programming.*
20. *What does it mean and what is following by optimizing a webpage?*
21. *Explain briefly the concepts of cryptology, cryptography and cryptanalysis.*
22. *What is the polymorphism in C # or JAVA? Give the examples.*
23. *What is the relational SGBD? What types of SGBD relationships do you know?*
24. *Describe briefly the Divide et Impera programming technique and give an example of a problem that can be solved using this technique.*
25. *What do you mean by information security on the Internet? Give the examples of the methods to ensure information security.*
26. *Describe briefly the concept of recursivity.*
27. *What does mean OOP inheritance? What kind of inheritance exists in C #?*
28. *What are the main technologies for making a web page?*
29. *What is the relational SGBD? Explain the concept of normalization.*
30. *What is the difference between .NET Framework and .NET Core?*
31. *How is implemented exception handling in C#?*
32. *What are value types and what are reference types in C#? Examples.*
33. *What is ADO.NET?*
34. *What is the difference between Waterfall and Agile methodologies?*
35. *What are the software project life cycles?*
36. *Define Scrum in Agile methodology.*
37. *Define Estimation process in Agile methodology.*
38. *Explain the Turing test*
39. *Are Siri (Apple) or Alexa (Amazon) “intelligent”? How about IBM Watson? Explain.*
40. *What is an expert system?*
41. *What is fuzzy logic?*
42. *What do we mean by a neuromorphic computer?*
43. *What is a perceptron?*
44. *What is an activation function? Give examples.*
45. *What do we mean by a “learning algorithm”? How are they classified?*
46. *What is the backpropagation algorithm and how does it work.*
47. *What does Deep Neural Networks and Deep Learning mean?*
48. *What does Recurrent Neural Networks mean?*
49. *What does Convolutional Neural Networks mean?*
50. *Why are graphic accelerators used for AI?*
51. *Enumerate and exemplify different types of robots.*