161. The \_\_\_\_\_\_\_\_\_\_\_\_ use of the P2P system resources (bandwidth, computing power, storage) should result in lower cost, and, thus, higher throughput of queries, i.e., a higher number of queries can be processed by the P2P system in a given time interval. **efficient**

141. Blockchain was invented for bitcoin to solve the double spending problem of previous digital currencies without the need of a trusted, central authority. **True**

46. The potential advantages of using a blockchain-based cryptocurrency are the following: **All of given (Fewer risks for merchants, Trust through the blockchain, without any central authority, Security and control, Low transaction)**

67. To increase data availability and access performance, P2P systems replicate data. **True**

102.OceanStore is a data management system designed to provide continuous access to persistent information. **True**

113. Top-k queries have been used in many domains such as: **All of given (multimedia databases, information retrieval, network and system monitoring )**

97. A parallel computer, or multiprocessor, is a form of distributed system made of a number of nodes (processors, memories, and disks) connected by a very fast network within one or more cabinets in the same room. **True**

65. Linear scale-up means sustained performance for a linear increase of database size and load. **True**

92. Shared-nothing clusters are widely used in practice, typically using NUMA nodes, because they can provide the best cost/performance ratio and scale up to very large configurations (thousands of nodes). **True**

43. NoSQL DBMSs and big data systems typically use shared nothing. **True**

40. Intra-operation means: **The same operation on different data**

36. Logical data integration and the resulting systems are known by a variety of names; data integration and information integration. **True**

3. Binary approaches are a special case of iterative n-ary. **True**

15. Neo4J – architecture **[provides extensive support for high availability through full replication both at the cluster level and across data centers]**

16. NoSQL means **Not only Structured Query Language**

17. Which are the main categories of NoSQL systems? **all of the above (key-value, graph, document, wide column)**

21. In every search engine the\_\_\_\_\_\_\_\_\_\_\_ plays one of the most crucial roles. **Crawlers**

14. Graph databases represent and store data directly as graphs which allows easy expression and fast processing of graph-like queries. **True**

24. RDF is the data model on top of HTML and forms a fundamental building block of the semantic web **False**

20. The web consists of “pages” that are connected by hyperlinks, and this structure can be modeled as a directed graph that reflects the hyperlink structure **True**

[[3]] have been a major focus of database technology. **both (declarative querying, efficient execution of queries)**

120. The issues related to consistency of a replicated database are: **Both of given (mutual consistency, transaction consistency)**

55. In Single Master with Limited Transparency, the update transactions are submitted and executed directly at the master site (as in the eager single master); once the update transaction commits, the refresh transaction is sent to the slaves. 1. an update transaction is first applied to the master replica 2. the refresh transaction is sent to the slaves 3. the transaction is committed at the master, and then; The sequence of execution steps is as follows: **1, 3, 2**

188. What is and represents Metasearching? **Metasearching is an approach for querying the hidden web. It involves selecting relevant databases, translating the user's query for each database, and merging the results. This ensures a comprehensive search experience by accessing multiple sources and providing the user with relevant information.**

189. State several reasons that have motivated the need for NoSQL systems

**NoSQL systems are databases that can store a lot of data, work fast, and change easily. They are good for different reasons. They can grow bigger by adding more computers. They can work faster by using simple data structures and avoiding complex operations. They can store different kinds of data without needing a fixed structure. They can run on cheap hardware and save money on hardware and software licenses.**