Question Paper

Answer all the questions.

1) Identify three important architecturally significant requirements of a big data system of healthcare-centric data. (10)

2) With an example demonstrate how quality attribute requirements of big data systems may be specified. (10)

3) Analyze how decisions pertaining to the coordination model, Data model, and management of resources can ensure a better design process. (10)

4) Show how two key quality attributes - privacy and security - may be achieved using architecture Tactics. (10)

5) Analyze the unique features of the fault-tolerance model of Pregel. (10)

6) Analyze how situations where aggregators and combiners are valuable in Pregel's model of computation. (10)

7) Identify three limitations in the distributed scheduling model of Mesos. State their implications. (10)

8) Show with an example how message passing works in Pregel's vertex-centric model. (10)

9) Describe the salient features of Mesos behavior for homogeneous tasks. (10)

10) (10)

With the help of an example, demonstrate the computation model of Pregel.