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SCHOOL OF INFORMATION TECHNOLOGY AND ENGINEERING

CONTINUOUS ASSESSMENT TEST – II - WINTER SEMESTER-2021-22

Programme Name & Branch: M.C.A

Class Number(s): VL2021220504563

Course Name Code: ITA6009

Course Name: Cloud Computing

Faculty Name: E.Sathiyamoorthy

Exam Duration: 90 Mins

ANSWER ALL QUESTIONS (5 X 10 = 50 MARKS)

1. A reputed school follows activity based learning method located in different parts of India has planned for integration of various branches to provide online access to all course materials including video format. They also planned to share the resources for learning to remote private users through some nodal offices so that remote students also get benefited. Elaborate the different ways of setting up the Inter-cloud by analysing their requirements with necessary diagrams.
2. For any smart city project implementation, an enterprise involved will deploy a small scale data center in cloud to cater the need of various departments. As the request increases as compared to the available resources, how the service provisioning request in an Inter-Cloud System is handled & also analyse the issues in it.
3. As part of Digital India initiative, the government has decided to implement online voting system which makes the voting process very easy and efficient, allowing the people to cast their vote through mobile application, web application and other possible ways. With millions of people voting through this system, it creates a huge amount of iterative data which makes the data processing more complex. Identify a programming model to count the vote and release the result in a shorter time. Deduce your answer to implement the programming model with task scheduling, job scheduling and speculative execution.
4. Consider a large user logs which are taken from a popular website, where key represents id's and values represent some measures of activity such as elapsed time for a particular session. Develop a MapReduce Algorithm that computes mean session length per user basis which would be useful for understanding user demographics.

5. The Weather Forecasting Company focuses on connecting people, businesses and governments with the world's best weather prediction model. This company generates four terabytes of data every hour and needs to provide analytic services that help companies understand the relationship between the weather and consumer behavior. Elaborate the framework of Hadoop and Justify why Hadoop can be a preferred tool to analysis of huge data set similar to above scenario.