Question Paper

MANIPAL UNIVERSITY

SCHOOL OF INFORMATION SCIENCES
FIRST SEMESTER Master of Engineering - ME (Big Data and Data Analytics)
DEGREE EXAMINATION - NOVEMBER 2017
DATE : Thursday, November 16, 2017
TIME : 10:00AM - 1:00PM
Large Scale Distributed Computing Systems [BDA 603]

Marks: 100   **Duration: 180 mins.**

Answer all the questions.

1)   Differentiate between Centralized and Hybrid Architectures (10)
        with an example.

2)   What is Virtualization, explain with an example and outline (10)
        difference between Primary storage and secondary storage
        facilities.

3)   Write a program to send a file from Client to Server, where (10)
        allocate a dynamic port in the server and client scans the
        port and pass the file to the dynamically assigned port.

4)   What is RPC? Explain the context with an example.   (10)

5)   What is Distributed System? Explain the ACID properties of (10)
        a distributed system.

6)   Explain the following: (20)
         A. What is the necessity of setting up a firewell in a
        complex network and Outline the difference   between
        Switch and a Router.   (10 marks)
         B. What is Chubby and describe the two methods of
        Importing data into BigTable.

                                                        (10
        marks)

7)   Outline the basics of CAP theorem and Justify how it plays (10)
        a major role in the system.

8)   Explain Two and Three-Phase Commit protocols? Explain (10)
        with example

9)   Outline the security threats that is posed to a distributed (10)
        system in the current cyber age and what are the security
        measures that are required to adopt counter the same.

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