Code: 9F00405a

MCA IV Semester Supplementary Examinations November/December 2017

DISTRIBUTED SYSTEMS

(For students admitted in 2012, 2013, 2014 & 2015 only)

Time: 3 hours Max. Marks: 60

Answer any FIVE questions
All questions carry equal marks
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1 (a) Discuss the various challenges to be met in designing a distributed system.
(b) What are the main types of network that are used to support distributed system?

2 (a) Explain the issues relating to datagram communication and Java API for this.
(b) What is a multicast communication? How is it useful in building constructing a distributed system?

3 (a) Discuss RMI invocation semantics as the design issue.
(b) Explain the architecture for distributed event notification.

4 (a) Describe how middleware is supported by the operating system facilities at the nodes of a distributed system.
(b) What is the cost of creating a new thread in an existing execution environment?
(c) Make a comparison of monolithic and microkernel approaches.

5 (a) Explain the characteristics of file system.
(b) Describe the architecture of SUN network file system.

6 (a) What are the main types of uniform resource identifier?
(b) Discuss different types of DNS queries.
(c) Explain Cristian's method for synchronizing clocks.

7 (a) Discuss the phases of two-phase commit protocol and its performance.
(b) How are deadlocks handled in distributed system?

8 (a) Describe the advantages of shared – memory programming model over message – based models.
(b) Explain in detail design goals and chief design features of Mach.

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