Code No: 126AP

R13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech III Year II Semester Examinations, May - 2016
DISTRIBUTED SYSTEMS
(Computer Science and Engineering)

Time: 3 hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

(25 Marks)

1.a) List the services provided by multiple servers, proxy servers and peer processes. [2]
b) Define types of failures. What is meant by byzantine failure? [3]
c) Define bully algorithm. [2]
d) Define the definition of the critical section. [3]
e) List the differences between TCP and UDP. [2]
f) State client-server communication. [3]
g) Explain name resolution. [2]
h) Explain other aspects in the Andrew file system. [3]
i) Explain recovery of nested transactions. [2]
j) Define distributed deadlock? [3]

PART - B

(50 Marks)

2.a) Describe the advantages and disadvantages of the HTML, URL and HTTP as core technologies for information browsing.
b) Discuss how distributed systems are more scalable than the centralized systems. [5+5]

OR

3.a) Demonstrate the design requirements for distributed architectures.
b) Explain how events are ordering in real-time with neat sketch. [5+5]

4.a) Explain different kinds of problems that are associated with the coordination and agreement in distributed systems.
b) Explain how election is done when any particular system crashes? [5+5]

OR

5.a) Differentiate failure assumptions and failure detectors.
b) Illustrate an example execution of the ring- based algorithm to show that processes are not necessarily granted entry to the critical section in happened-before order. [5+5]

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