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Question Paper Code: 41264

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

Sixth Semester

Computer Science and Engineering

14UCS604 - DISTRIBUTED SYSTEMS

(Regulation 2014)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- The _____ is also a very large distributed system.
(a) Internet (b) WWW (c) Web service (d) Server
- which common characteristics can be used to assess distributed systems?
(a) Resource Sharing (b) Concurrency
(c) Scalability (d) All the above
- TCP provides the abstraction of a _____ stream between pairs of processes.
(a) two-way (b) single-way
(c) multi-way (d) none of these
- A datagram sent by _____ is transmitted without acknowledgement from sender to receiver.
(a) UDP (b) TCP (c) TCP/IP (d) IP
- Which one will provide distribution transparency?
(a) NOS (b) DOS (c) Middleware (d) Hardware
- _____ is not possible in distributed file system.
(a) File replication (b) Migration
(c) Client interface (d) Remote access

7. Process Management contains
- | | |
|--------------------------|---------|
| (a) Platform description | (b) IP |
| (c) Memory management | (d) RPC |
8. The output of atomic clocks is used as the standard for elapsed time, known as
- | | |
|-------------------------------|--------------------------------|
| (a) International atomic time | (b) Coordinated Universal time |
| (c) Logical clocks | (d) GPS |
9. Region can be shared in
- | | |
|-----------------------------------|-------------------|
| (a) Libraries | (b) Kernel |
| (c) Shared data and communication | (d) All the above |
10. Abstraction of a single activity
- | | | | |
|-------------|------------|------------|-------------|
| (a) Process | (b) Thread | (c) Region | (d) Program |
|-------------|------------|------------|-------------|

PART - B (5 x 2 = 10 Marks)

11. Define distributed systems.
12. Define object interfaces.
13. List out the transparencies in file system.
14. What is clock drift?
15. What are the types of process migration in computing?

PART - C (5 x 16 = 80 Marks)

16. (a) Evaluate the trends in distributed system. (16)
- Or
- (b) Interpret the challenges in distributed systems. (16)
17. (a) (i) Discuss about the characteristics of inter process communication. (8)
- (ii) Write short notes on IP multicast. (8)
- Or
- (b) Criticize the implementation of RMI and its design Issues in various aspects. (16)
18. (a) Paraphrase the concept of distributed file systems with an example. (16)

Or

(b) illustrate with a case study explain about the application of distributed algorithm routing overlays. (16)

19. (a) Compose the followings: (i) Clocks (ii) Events (iii) Process States (iv) UTC. (16)

Or

(b) Define distributed mutual exclusion. Explain any two mutual exclusion algorithms. (16)

20. (a) Explain about distributed shared memory with neat sketch. Also discuss its issues in design and implementation. (16)

Or

(b) (i) Summarize the features of load balancer in the view of vendor specific. (8)

(ii) Write short notes on resource management. (8)
