

Code No: N0526/R07

Set No. 1

IV B.Tech I Semester Supplementary Examinations, Feb/Mar 2011
ADVANCED COMPUTING CONCEPTS
(Common to Computer Science & Engineering and Information Technology)
Time: 3 hours Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Write about the following layers in grid architecture.
 - (a) Collective Layer
 - (b) Resource Layer. [8+8]
2. How is autonomic assessment done? What is the goal? [16]
3. (a) What is the purpose of system monitoring? Why are general purpose monitoring tools not suited for clusters?
 - (b) What are the subjects of monitoring? [8+8]
4. Discuss the design issues of DSMs briefly. [16]
5. (a) What are the features of NanOS?
 - (b) Write the design objectives of NanOS. [8+8]
6. (a) Explain the sliding technique used by 'fitaly' keyboard.
 - (b) How does T9 input system reduces the number of keystrokes?
7. (a) Is Standard Java not suitable for real time application? If so, what is the alternative for real-time applications?
 - (b) Pervasive Computing Technology led to what changes in cars? [8+8]
8. What is a qubit? What are the possible states for a qubit? What is Dirac notation? Give the linear combination of states. Give an example. [16]

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Answer any FIVE Questions
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1. Draw the Layered Architecture of Grid. Explain briefly. [16]
2. What is autonomic computing? Explain What are goals of autonomic computing? [16]
3. What is the goal of industry standard API? Explain performance issues of Beowulf, Fast sockets, PARMA. [16]
4. (a) What is meant by critical path partitions? Give an example.
(b) Write about task duplication with example. [8+8]
5. (a) what is meant by reliable object Invocation ? for what purposes it is used?
(b) Write about HIDRA concurrency control. [8+8]
6. (a) Define and Explain Pervasive Computing
(b) Briefly explain the automobile computing Scenario. [8+8]
7. (a) Give the architecture of safeway and explain how remote shopping can be done.
(b) What Service should be provided airline check-in and booking via WAP Phones? [8+8]
8. Explain Deutsch-Jozsa algorithm. [16]

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Set No. 3

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Answer any FIVE Questions
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1. Write the types of Grids. [16]
2. (a) What capabilities should be present in designing an autonomic manager?
(b) Give the summary of current management versus autonomic self management of the future? [8+8]
3. (a) Explain tuning of caching strategies and operating systems.
(b) Why are I/O subsystems used in conventional servers are not good for Cluster nodes? Explain. [8+8]
4. (a) Why are optimum load sharing strategies hard to implement? Give reasons.
(b) What is meant by domino effect?
(c) Categorize the check pointing techniques. [8+4+4]
5. (a) Write about bandwidth and latency of NICAM.
(b) Write briefly about the implementation of NICAM. [8+8]
6. (a) How does pervasive computing has become a new dimension of personal computing. Explain?
(b) Explain any one pervasive computing scenario. [8+8]
7. (a) What are the steps involved in a typical WAP email session?
(b) Show how an OSGi gateway is integrated into a car information system. [8+8]
8. Draw the quantum circuit for teleporting a qubit. Explain quantum teleportation. [16]

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Set No. 4

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1. Write the relationship of grid architecture with other distributed technologies. [16]
2. Discuss the five levels of autonomic computing implementation? [16]
3. (a) Show the active message communication model diagrammatically.
(b) Write the transport operations. [8+8]
4. (a) Write the approaches for write synchronization.
(b) What is meant by double faulting? Discuss algorithms used to solve this problem. [6+10]
5. What is NICAM? Explain its design and primitives. [16]
6. (a) Discuss the importance of pervasive computing Market
(b) What is meant by i-mode system? What is its strength? [10+6]
7. What are pervasive devices? Explain how they are used in business applications. [16]
8. Explain
(a) Z-gate
(b) Hadamard gate. [8+8]
