Code No: 07A70507 **R07** **Set No. 2**

IV B.Tech I Semester Examinations,December 2011
ADVANCED COMPUTING CONCEPTS
Common to Information Technology, Computer Science And Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What are the features of NanOS?
   (b) Write the design objectives of NanOS. [8+8]
2. Explain two, three qubit gates. Draw truth tables. Give some examples. [16]
3. What is the basic management of an autonomic computing architecture? [16]
4. Briefly explain the evolving technologies that influences the evolution of Mobile devices. [16]
5. (a) What is the difference between IPV4 & Mobile Internet Protocols?
   (b) Write the steps in connecting to a Mobile node. [8+8]
6. (a) What are rigid jobs? Write about process migration in rigid jobs.
   (b) What is meant by MOSIX? Explain its features. [8+8]
7. State and explain communication mechanisms for clusters. [16]
8. (a) What is Grid Portal? Give some Examples.
   (b) What is a Data Grid? How is Data Management done? [8+8]

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Code No: 07A70507 **R07** **Set No. 4**

IV B.Tech I Semester Examinations,December 2011
ADVANCED COMPUTING CONCEPTS
Common to Information Technology, Computer Science And Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Give an overview of marketing the communication and data exchange with Pervasive computing devices.
   (b) What technologies are used by 3G mobiles as communication to market? [8+8]
2. (a) What is ALAP start time?
   (b) Write the procedure for computing start time with ALAP.
   (c) Write the insertion scheduling heuristic algorithm [4+8+4]
3. Give an overview of COMPas. [16]
4. (a) Differentiate programmed I/O and direct memory access.
   (b) What are the routing mechanisms in cluster interconnect? [8+8]
5. 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]
6. (a) What are the main NGOSS design goals?
   (b) What are the business benefits are offered by NGOSS? [8+8]
7. (a) Show how a package can be transferred via Mobile IP. Explain.
   (b) How does Out-of-Sync situation in device clients can be handled? [8+8]
8. Give the Practical View of OGSA/OGSI. [16]

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Code No: 07A70507 **R07** **Set No. 1**

IV B.Tech I Semester Examinations,December 2011
ADVANCED COMPUTING CONCEPTS
Common to Information Technology, Computer Science And Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) How is end to end security provided in pervasive devices?
   (b) What is the use of Cryptographic algorithms? Explain their purpose in offering security to pervasive devices. [8+8]
2. (a) Explain how fault tolerance can be done by means of check pointing.
   (b) Explain about process allocation in GatoStar architecture. [8+8]
3. How is synchronization time between threads calculated? Give an example [16]
4. (a) Explain the sliding technique used by 'fitaly' keyboard.
   (b) How does T9 input system reduces the number of keystrokes? [8+8]
5. (a) What is Meta cluster? Give an example.
   (b) How can meta clusters be secure? [8+8]
6. What is Taffoli gate? Write about universality of Taffoli gate. Give some related logic gates. [16]
7. Discuss the five levels of autonomic computing implementation. [16]
8. Describe possible benefits of Grid Computing. [16]

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Code No: 07A70507 **R07** **Set No. 3**

IV B.Tech I Semester Examinations,December 2011
ADVANCED COMPUTING CONCEPTS
Common to Information Technology, Computer Science And Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What are Message Queuing Systems?
   (b) Explain about device Security. [8+8]
2. Give the two representations of CNOT gate, Briefly explain the CNOT gate. Give Truth table. [16]
3. Write about Paralel I/O, Disk directed I/O. [16]
4. Define the following with respect to NanOS:
   (a) Object
   (b) Agent
   (c) Kernel agent
   (d) User agent
   (e) Task. [16]
5. What are the performance levels for business mega or tera (flops/bps/B)? [16]
6. (a) What is a heterogeneous cluster? Give its features.
   (b) What scenarios are provided by OSF distributed computing? Explain. [8+8]
7. Define open standards illustrate of different standard organizations. [16]
8. (a) Briefly explain text entry using octane input method.
   (b) Explain the technology improvement in display devices. [8+8]

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