Code No: RR320501 **RR** **Set No. 2**

III B.Tech II Semester Examinations,December 2010
ADVANCED COMPUTER ARCHITECTURE
Common to Information Technology, Computer Science And Engineering, Computer Science And Systems Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) How are the two functions of a Shuffle Exchange are implemented?
   (b) Compare the various Multistage SIMD Network. [10+6]
2. (a) Describe M(j,k) sorting algorithm.
   (b) Describe a Bit serial Associative memory organization with suitable diagram. [8+8]
3. (a) Explain briefly, the architecture of the Irvine data flow computer.
   (b) Explain the concept of grouping instruction cells into cellblocks. [8+8]
4. (a) Explain multistage delta network used in Multiprocessor.
   (b) Analyse the performance of a 2x2 crosspbar. [8+8]
5. (a) Compare control flow computers and Dataflow computers.
   (b) Explain the computer classification based on the following:
      i. SISD
      ii. SIMD
      iii. MISD
      iv. MIMD. [8+8]
6. (a) What are the two resource allocation decisions that are made in multiprocessing systems?
   (b) Explain briefly the two basic kinds of processor scheduling in multiprocessors.
   (c) With the help of a diagram, explain states of a process and their state transitions. [4+4+8]
7. (a) Demonstrate the effect of different synchronization mechanisms on the performance of C.mmp.
   (b) Describe the functional structure of a computer module in the C.mmp. [8+8]
8. (a) Differentiate between linear and nonlinear piplines. Give their sample pipeline structures and reservation tables.
   (b) Explain internal forwarding techniques with examples. What are its advantages? [8+8]

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Code No: RR320501 **RR** **Set No. 4**

III B.Tech II Semester Examinations,December 2010
ADVANCED COMPUTER ARCHITECTURE
Common to Information Technology, Computer Science And Engineering, Computer Science And Systems Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Demonstrate the effect of different synchronization mechanisms on the performance of C.mmp.
   (b) Describe the functional structure of a computer module in the C.mmp. [8+8]
2. (a) Explain briefly, the architecture of the Irvine data flow computer.
   (b) Explain the concept of grouping instruction cells into cellblocks. [8+8]
3. (a) How are the two functions of a Shuffle Exchange are implemented?
   (b) Compare the various Multistage SIMD Network. [10+6]
4. (a) Explain multistage delta network used in Multiprocessor.
   (b) Analyse the performance of a 2x2 crosspbar. [8+8]
5. (a) What are the two resource allocation decisions that are made in multiprocessing systems?
   (b) Explain briefly the two basic kinds of processor scheduling in multiprocessors.
   (c) With the help of a diagram, explain states of a process and their state transitions. [4+4+8]
6. (a) Differentiate between linear and nonlinear piplines. Give their sample pipeline structures and reservation tables.
   (b) Explain internal forwarding techniques with examples. What are its advantages? [8+8]
7. (a) Describe M(j,k) sorting algorithm.
   (b) Describe a Bit serial Associative memory organization with suitable diagram. [8+8]
8. (a) Compare control flow computers and Dataflow computers.
   (b) Explain the computer classification based on the following:
      i. SISD
      ii. SIMD
      iii. MISD
      iv. MIMD. [8+8]

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Code No: RR320501 **RR** **Set No. 1**

III B.Tech II Semester Examinations,December 2010
ADVANCED COMPUTER ARCHITECTURE
Common to Information Technology, Computer Science And Engineering, Computer Science And Systems Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Demonstrate the effect of different synchronization mechanisms on the performance of C.mmp.
   (b) Describe the functional structure of a computer module in the C.mmp. [8+8]
2. (a) How are the two functions of a Shuffle Exchange are implemented?
   (b) Compare the various Multistage SIMD Network. [10+6]
3. (a) Differentiate between linear and nonlinear piplines. Give their sample pipeline structures and reservation tables.
   (b) Explain internal forwarding techniques with examples. What are its advantages? [8+8]
4. (a) Explain multistage delta network used in Multiprocessor.
   (b) Analyse the performance of a 2x2 crosspbar. [8+8]
5. (a) Compare control flow computers and Dataflow computers.
   (b) Explain the computer classification based on the following:
      i. SISD
      ii. SIMD
      iii. MISD
      iv. MIMD. [8+8]
6. (a) Explain briefly, the architecture of the Irvine data flow computer.
   (b) Explain the concept of grouping instruction cells into cellblocks. [8+8]
7. (a) What are the two resource allocation decisions that are made in multiprocessing systems?
   (b) Explain briefly the two basic kinds of processor scheduling in multiprocessors.
   (c) With the help of a diagram, explain states of a process and their state transitions. [4+4+8]
8. (a) Describe M(j,k) sorting algorithm.
   (b) Describe a Bit serial Associative memory organization with suitable diagram. [8+8]

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Code No: RR320501 **RR** **Set No. 3**

III B.Tech II Semester Examinations,December 2010
ADVANCED COMPUTER ARCHITECTURE
Common to Information Technology, Computer Science And Engineering, Computer Science And Systems Engineering

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Explain briefly, the architecture of the Irvine data flow computer.
   (b) Explain the concept of grouping instruction cells into cellblocks. [8+8]
2. (a) How are the two functions of a Shuffle Exchange are implemented?
   (b) Compare the various Multistage SIMD Network. [10+6]
3. (a) Explain multistage delta network used in Multiprocessor.
   (b) Analyse the performance of a 2x2 crosspbar. [8+8]
4. (a) Describe M(j,k) sorting algorithm.
   (b) Describe a Bit serial Associative memory organization with suitable diagram. [8+8]
5. (a) Compare control flow computers and Dataflow computers.
   (b) Explain the computer classification based on the following:
      i. SISD
      ii. SIMD
      iii. MISD
      iv. MIMD. [8+8]
6. (a) What are the two resource allocation decisions that are made in multiprocessing systems?
   (b) Explain briefly the two basic kinds of processor scheduling in multiprocessors.
   (c) With the help of a diagram, explain states of a process and their state transitions. [4+4+8]
7. (a) Differentiate between linear and nonlinear piplines. Give their sample pipeline structures and reservation tables.
   (b) Explain internal forwarding techniques with examples. What are its advantages? [8+8]
8. (a) Demonstrate the effect of different synchronization mechanisms on the performance of C.mmp.
   (b) Describe the functional structure of a computer module in the C.mmp. [8+8]

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