Code No: NR220501 **NR** **Set No. 2**

II B.Tech II Semester Examinations,December 2010
COMPUTER ORGANISATION
Common to Information Technology, Electronics And Computer Engineering, Computer Science And Engineering, Computer Science And Systems Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. (a) What is the necessity of I/O modules. Explain
   (b) What type of commands an I/O interface may receive? Explain. [8+8]
2. (a) Draw a flowchart that describes the CPU-I/O Channel communication.
   (b) Describe Interrupt Cycle. [10+6]
3. (a) List the micro-operations required to carryout the following instructions. Assume a simple CPU with single accumulator.
      i. Load accumulator
      ii. Store accumulator
      iii. Add to accumulator
      iv. Complement accumulator
   (b) What is ICC? What for ICC is used? [12+4]
4. Write the instruction format of POWER-PC processor and explain clearly giving all significant features of format design considering all type of instructions. [16]
5. (a) Clearly distinguish between
      i. Packed/Unpacked microinstructions
      ii. Hard/Soft microprogramming
   (b) List and briefly explain applications of microprogramming. [10+6]
6. (a) What do you mean by page fault?
   (b) Explain how number of page faults can be calculated for the given page trace using FIFO page replacement strategy. (Assume 3 frames are available in the memory). [6+10]
7. (a) Compare SRAM with DRAM
   (b) Why are the multilevel memories used in a computer system ? [8+8]
8. (a) Describe an instruction execution using a state diagram.
   (b) Describe a program of flow of control without and with interrupts. [8+8]

⋆ ⋆ ⋆ ⋆ ⋆

Code No: NR220501 **NR** **Set No. 4**

II B.Tech II Semester Examinations,December 2010
COMPUTER ORGANISATION
Common to Information Technology, Electronics And Computer Engineering, Computer Science And Engineering, Computer Science And Systems Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. Write the instruction format of POWER-PC processor and explain clearly giving all significant features of format design considering all type of instructions. [16]
2. (a) What is the necessity of I/O modules. Explain
   (b) What type of commands an I/O interface may receive? Explain. [8+8]
3. (a) Compare SRAM with DRAM
   (b) Why are the multilevel memories used in a computer system ? [8+8]
4. (a) Clearly distinguish between
      i. Packed/Unpacked microinstructions
      ii. Hard/Soft microprogramming
   (b) List and briefly explain applications of microprogramming. [10+6]
5. (a) Describe an instruction execution using a state diagram.
   (b) Describe a program of flow of control without and with interrupts. [8+8]
6. (a) List the micro-operations required to carryout the following instructions. Assume a simple CPU with single accumulator.
      i. Load accumulator
      ii. Store accumulator
      iii. Add to accumulator
      iv. Complement accumulator
   (b) What is ICC? What for ICC is used? [12+4]
7. (a) What do you mean by page fault?
   (b) Explain how number of page faults can be calculated for the given page trace using FIFO page replacement strategy. (Assume 3 frames are available in the memory). [6+10]
8. (a) Draw a flowchart that describes the CPU-I/O Channel communication.
   (b) Describe Interrupt Cycle. [10+6]

⋆ ⋆ ⋆ ⋆ ⋆

Code No: NR220501 **NR** **Set No. 1**

II B.Tech II Semester Examinations,December 2010
COMPUTER ORGANISATION
Common to Information Technology, Electronics And Computer Engineering, Computer Science And Engineering, Computer Science And Systems Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. Write the instruction format of POWER-PC processor and explain clearly giving all significant features of format design considering all type of instructions. [16]
2. (a) Draw a flowchart that describes the CPU-I/O Channel communication.
   (b) Describe Interrupt Cycle. [10+6]
3. (a) Clearly distinguish between
      i. Packed/Unpacked microinstructions
      ii. Hard/Soft microprogramming
   (b) List and briefly explain applications of microprogramming. [10+6]
4. (a) What do you mean by page fault?
   (b) Explain how number of page faults can be calculated for the given page trace using FIFO page replacement strategy. (Assume 3 frames are available in the memory). [6+10]
5. (a) What is the necessity of I/O modules. Explain
   (b) What type of commands an I/O interface may receive? Explain. [8+8]
6. (a) Describe an instruction execution using a state diagram.
   (b) Describe a program of flow of control without and with interrupts. [8+8]
7. (a) Compare SRAM with DRAM
   (b) Why are the multilevel memories used in a computer system ? [8+8]
8. (a) List the micro-operations required to carryout the following instructions. Assume a simple CPU with single accumulator.
      i. Load accumulator
      ii. Store accumulator
      iii. Add to accumulator
      iv. Complement accumulator
   (b) What is ICC? What for ICC is used? [12+4]

⋆ ⋆ ⋆ ⋆ ⋆

Code No: NR220501 **NR** **Set No. 3**

II B.Tech II Semester Examinations,December 2010
COMPUTER ORGANISATION
Common to Information Technology, Electronics And Computer Engineering, Computer Science And Engineering, Computer Science And Systems Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. (a) Compare SRAM with DRAM
   (b) Why are the multilevel memories used in a computer system? [8+8]
2. (a) Clearly distinguish between
      i. Packed/Unpacked microinstructions
      ii. Hard/Soft microprogramming
   (b) List and briefly explain applications of microprogramming. [10+6]
3. (a) List the micro-operations required to carryout the following instructions. Assume a simple CPU with single accumulator.
      i. Load accumulator
      ii. Store accumulator
      iii. Add to accumulator
      iv. Complement accumulator
   (b) What is ICC? What for ICC is used? [12+4]
4. (a) Describe an instruction execution using a state diagram.
   (b) Describe a program of flow of control without and with interrupts. [8+8]
5. (a) What is the necessity of I/O modules. Explain
   (b) What type of commands an I/O interface may receive? Explain. [8+8]
6. (a) What do you mean by page fault?
   (b) Explain how number of page faults can be calculated for the given page trace using FIFO page replacement strategy. (Assume 3 frames are available in the memory). [6+10]
7. (a) Draw a flowchart that describes the CPU-I/O Channel communication.
   (b) Describe Interrupt Cycle. [10+6]
8. Write the instruction format of POWER-PC processor and explain clearly giving all significant features of format design considering all type of instructions. [16]

⋆ ⋆ ⋆ ⋆ ⋆