Third Year Even Semester  
Peripherals and Interfacings

**Resources:**

1. [The Intel microprocessors (8086/8088, 80186/80188, 80286, 80386, 80486 Pentium, Pentium Pro Processor, Pentium II, Pentium 4, and Core2 with 64-bit Extensions): Architecture, Programming, and Interfacing - Barry B. Brey, eighth edition](https://www.pdfdrive.com/the-intel-microprocessors-80868088-8018680188-80286-80386-80486-the-architecture-programming-and-interfacing-8th-edition-e158290350.html)
2. [Digital Systems: Principles and Applications - Tocci, Widmer, and Moss, tenth edition](https://www.pdfdrive.com/digital-systems-principles-and-applications-e33416544.html)
3. Microprocessors and Interfacing – Douglas V Hall, third edition
4. [EPROMS 2708, 2716, 2732, 2764, 27128, 27256, 27512, 274001](https://www.unitechelectronics.com/EPROM_data.htm)

**Microprocessor Based System Design**

**Hardware and Software Interfacing in Microcomputer System Design**

**Hardware and I/O Design**

**Building, Debugging, Testing, and Linking Program Modules**

**Programming EPROM**

**Interfacing Components**

**8284A Programmable Timer**

**Clock Generator (8284A)[1] - (9.2)**

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  + The 8-Bit ISA Bus Output Interface
  + The 8-Bit ISA Bus Input Interface
  + The 16-Bit ISA Bus
* 15.2: The Peripheral Component Interconnect (PCI) Bus
  + The PCI Bus Pin-Out
  + The PCI Address/Data Connections
  + Configuration Space
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  + PCI Interface
  + PCI Express Bus
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* Timing in General
* Read Timing
* Write Timing

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* The 8288 Bus Controller

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  + The Operation of a Real Mode Interrupt
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  + Storing an Interrupt Vector in the Vector Table
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**Interfacing ICs of I/O Devices, I/O Ports**

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  + Internal Registers
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**Memory Device**

**Decoder Model**

* 74LS138
  + [74LS138 Decoder Pinout, Features, Circuit & Datasheet](https://components101.com/ics/74ls138-3-8-line-decoder-ic)
  + [74LS138 IC: Pin Configuration, Features, Circuit Diagram and Applications](https://www.elprocus.com/3-to-8-line-decoder-74ls138-ic-pin-configuration-features-circuit-and-applications/)
  + [74LS138 pinout, features, example, datasheet and applications](https://microcontrollerslab.com/74ls138-pinout-working-features-datasheet-example/)

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* 10-4: 8086, 80186, 80286, and 80386SX (16-bit) Memory Interface
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* 12.7: Types of ROMs
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* 12.12: Static RAM (SRAM)
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* 12.15: DRAM Read/Write Cycles
  + Dram Read Cycle
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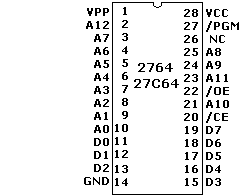
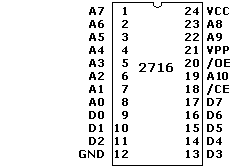
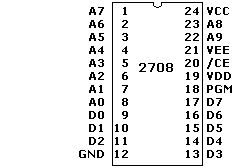
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* 8086 and 8088 Addressing and Address Decoding - C.17
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* 2708: has a 10-bit address bus
* 2716: has a 11-bit address bus
* 2764: has a 13-bit address bus



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* 14.3: Instruction Set
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**Numeric Data Processor**

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**AD and DA Converters Related Chips**

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**High Power Devices**