AMEM15 ELECTRONICS AND MICROPROCESSORS

UNIT-1 SEMICONDUCTORS AND RECTIFIERS

1.1 Classification of solids based on energy band theory

1.2 Intrinsic semiconductors

1.3 Extrinsic semiconductors-P type and N type-PN junction

1.4 Zenor effect-Zenor diode characteristics

1.5 Half wave and full wave rectifiers -Voltage regulation

UNIT-2 TRANSISTORS AND AMPLIFIERS

2.1 Bipolar junction transistor

2.2 CB, CE, CC configuration and characteristics

2.3 Biasing circuits- Class A, B and C amplifiers

2.4 Field effect transistor

2.5 Configuration and characteristic of FET amplifier

2.6 SCR, Diac, Triac,

2.7 UJT Characteristics and simple applications-Switching transistors

2.8 Concept of feedback

2.9 Negative feedback Application in temperature and motor speed control.

UNIT-3 DIGITAL ELECTRONICS

3.1 Binary number system

3.2 AND, OR, NOT, NAND, NOR circuits-Boolean algebra

3.3 Exclusive OR gate, Flip flops-Half and full adders,

3.4 Registers-Counters-A/D and D/A conversion.

UNIT-4 8085 MICROPROCESSOR

4.1 Block diagram of microcomputer

4.2 Architecture of 8085-Pin configuration-

4.3 Instruction set

4.4 Addressing modes Simple programs using arithmetic and logical operations.

UNIT V INTERFACING AND APPLICATIONS OF MICROPROCESSOR

5.1 Basic interfacing concepts

5.2 Interfacing of Input and Output devices

5.3 Applications of microprocessor Temperature control,

5.4 Stepper motor control, traffic light control.

References Books:
1. Malvino and Leach, "Digital Principles and Applications", Tata McGraw-Hill, 1996
2. Mehta V.K, "Principles of Electronics", S. Chand and Company Ltd., 1994
3. Dougles V.Hall, "Microprocessor and Interfacing", Programming and Hardware, Tata McGraw-Hill, 1999.