

Core theory course (Disciplinary)

CPH-602: DIGITAL ELECTRONICS AND PROGRAMMING IN C-II

UNIT- I

Digital Electronic:

A-bit memory(R-S Flip flop), Flip Flops, J-KFlip Flop, D Flip Flop; T-type FlipFlop , shift-register, seriato parallel converter, series-in rif.s out register, paraller to series converter, parallel in parallel out, right-shift, left-shift register, digital delay line, sequence generator.

Basic Reffrence:

Electronics and Radio engineering (9/e Reprint-2002) By M.L.Gupta (D.R. Sons New Delhi)

UNIT- II

Counters:

Shift register ring counter, Johnson counter, Basic clocks, Ripple (asynchrpnus)counters, Rip'ple center, Updown counter, Divided by -N counter, Sychronus counter, Series carry, Parrel carry, Up down Sychronus counter with Parrel carry, Sychronus decade counter, Application of counters, Digital to Analog conversion, Variable resistor network, Binery adder, D/A converter, D/A accuracy and resolution, A/D converter counter rmethod, A/D converter simultaneous conversion.

Basic Reffrence:

Electronics and Radio engineering (9/e Reprint-2002) By M.L.Gupta (D.R. Sons New Delhi)

UNIT- III

Structures and Unions :

Introduction, Defining a structure, Declaring structure variables, Accessing structure members, Structure initialization, copying and comparing structure variables, Operation on individual members, Arrays of structure, Arrays within structure, Structures within structures, Structures and functions, Unions, Size of structures, Bit fields

Pointers : Concept, accessing the address of variables, declaring and initializing pointers, accessing variables through pointers, pointer expressions, pointer increments and scale factor, pointers and arrays, pointer and character strings, pointers and functions, pointers and structures

UNIT- IV

File management in C:

Defining and Opening a File, Closing a File, I/O operations on Files, Error handuling during I/O operations, Random Access to Files, Command Line Arguments.

Developing a C program:

Program Design, Program Coding, Common Programming Errors, Program Testing and Debugging, Program Efficiency.

Basic reference :

Balagurusamy E., Programming in ANSI C (IIIInd Ed.), TMH Pub.(For U-III&IV)