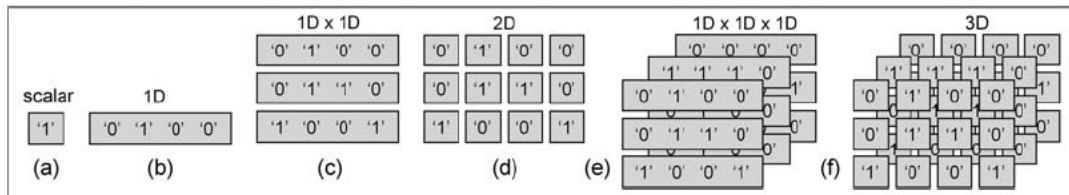


## ECE 477 LAB 5

- 1) In the below figure array types are shown. Do exercise 3.22 (page 101 in pdf) from the hand book. Write down the results. If necessary do simulation.



**Figure 3.2**

Bit-based arrays: (a) Scalar (single bit), (b) 1D (vector of bits), (c)  $1D \times 1D$  (pile of vectors), (d) 2D (matrix of bits), (e)  $1D \times 1D \times 1D$  (block of vectors), and (f) 3D (block of bits).

**Figure-1 ( In pdf page 56, Hand copy page 41)**

- 2) Do exercise 3.24 to 3.30 from the hand book. Write down the results. If necessary do related simulations.

### Homework

- 1) Design an 8-to-1 Multiplexer with Enable. (Use “when-else”)
- 2) Design a  $2^N$ -to-1 Multiplexer with Enable. (Use “generic”)( $N=3$ )
- 3) Design a 4-to-1 Multiplexer with Enable. (Use logic gates)
- 4) Design a 2-to-1 Multiplexer with Enable. (Use “case”)
- 5) Design a 16-to-1 Multiplexer with Enable. (Use “with-select”)