

TUTORIAL 1 (Chapter 1)

SECTION A

MULTIPLE CHOICE QUESTIONS

A1. The main types of resources in the FPGA are _____.

- (I) I/O Block
 - (II) Interconnection wires & programmable switches
 - (III) Logic Blocks
 - (IV) Lookup tables
- (a) (I) & (II)
 - (b) (I) & (III)
 - (c) (I), (II) & (III)
 - (d) (I), (II) & (IV)

Ans()

A2. The Boolean expression for the output E in the lookup table shown in Figure A2 is:

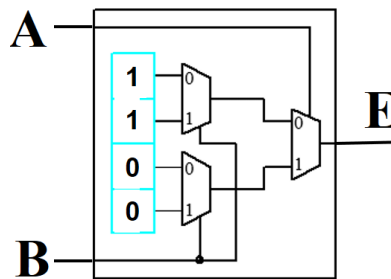


Figure A2

- (a) A'
- (b) A
- (c) B'
- (d) B

Ans()

SECTION B

B1. Derive the simplified Boolean expressions for E & F in the lookup table shown in Figure B1.

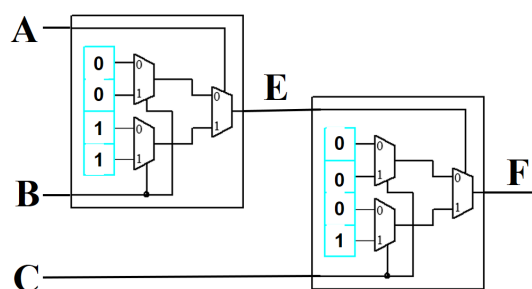


Figure B1

- B2. $F = AC' + B'C' + A'BC$. Fill in the data correctly in the SRAM cells of the lookup table shown in Figure B2.

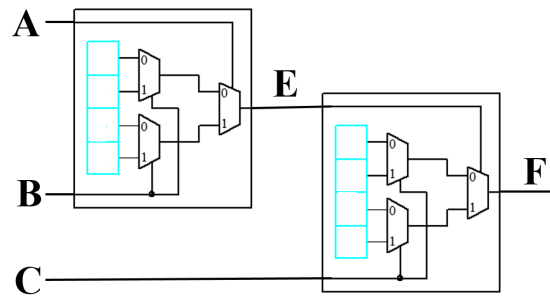


Figure B2