

Saif Ahmed
~~ahmeds7~~

10/9/16
 661925946

Lab #5 6060

1.

A	B	C	D	E	F
0	0	0	0	1	0
0	0	1	0	0	1
0	1	0	0	0	0
0	1	1	1	0	1
1	0	0	1	1	1
1	0	1	0	0	0
1	1	1	0	0	1

2.

$$D = \bar{A}\bar{B}\bar{C} + \bar{A}BC + A\bar{B}\bar{C} + A\bar{B}C$$

$$E = \bar{A}\bar{B}\bar{C} + \bar{A}\bar{B}C + A\bar{B}\bar{C} + \bar{B}AC$$

$$F = \bar{A}\bar{B}C + \bar{A}BC + A\bar{B}C + ABC$$

3.

C \ AB	00	01	11	10
0	0	0	0	0
1	1	1	1	1

$F = C$

4. From espresso: $F = C$

5.

A	B	C	D	E
0	0	0	0	0
0	0	1	0	1
0	1	0	1	0
0	1	1	1	0
1	0	0	0	0
1	0	1	1	0 0
1	1	0	0	1
1	1	1	1	1

6. D =

C \ AB	00	01	11	10
0	0	1	0	0
1	0	1	1	1

$$D = \bar{A}B + AC$$

7. From espresso: $\bar{A}B + AC$

A	B	C
0	0	0
0	0	1
0	1	0
0	1	1
1	0	0
1	0	1
1	1	0
1	1	1

$$D = \bar{A}B + AC$$

```
#lab5 problem 1 input
```

```
.i 3
```

```
..
```

```
.o 3
```

```
000 010
```

```
001 011
```

```
010 100
```

```
011 101
```

```
100 110
```

```
101 111
```

```
110 000
```

```
111 001
```

#lab5 problem 1 output

.i 3

..

.o 3

.p 4

01- 100

10- 100

--1 001

-0- 010

.e

#resulting expression for $F = C$

#line above added for clarity

#lab 5 problem 5 input

.i 3

..

.o 2

000 00

001 01

010 10

011 11

100 00

101 10

110 01

111 11

```
#lab 5 problem 5 output
```

```
.i 3
```

```
..
```

```
.o 2
```

```
.p 4
```

```
01- 10
```

```
1-1 10
```

```
11- 01
```

```
0-1 01
```

```
.e
```

```
#resulting expression for  $D = A'B + AC$ 
```

```
#line above added for clarity
```