Lawrence Naidu

CpE 186

12/03/18

Collaborated with Sergio Zavala

Homework #8

1

a) (NOT (A OR B) AND NOT C OR (E OR D)) AND NOT E

(NOT (AB)OR AND C NOT OR (ED)OR) AND E NOT  
((AB)OR NOT AND C NOT OR (ED)OR) AND E NOT  
((AB)OR NOT C NOT AND (ED)OR) OR AND E NOT  
((AB)OR NOT C NOT AND (ED)OR) OR E NOT AND

AB OR NOT C NOT AND ED OR OR E NOT AND

b) (A+B+C)\*((E+B)/(C+D))+F\*2

(A+B+C)\*((E+B)/(C+D))+F\*2  
 (A B + C +) \* ((E B +) / (C D +)) + (F 2 \*)  
A B + C + E B + C D + / \* F 2 \* +

2.

c) ECDBA\*F/+G-H/\*+

(E + (C \* (((D + ((B\*A)/F)) – G ) / H)))

d) ABCDE OR AND AND AND

(A AND ( B AND ( C AND ( D OR E ))))

3.

In system programming, an **interrupt is** a signal to the processor emitted by hardware or software indicating an event that **needs** immediate attention. Hardware **interrupts are** used by **devices** to communicate that they **require** attention from the operating system.

**The priority interrupt bus allows interrupter modules to request interrupts from a device and interrupt handlers may need to use the data-transfer bus at the same time.**

4. A virtual memory has the following specification:

* Page size: 4096 words
* Number of virtual pages: 16 (0 to 15)
* Number of physical page frames: 4 (0 to 3)
* Virtual pages currently in physical memory:
  + virtual page 14 in physical page 0
  + virtual page 0 in physical page 1
  + virtual page 10 in physical page 2
  + virtual page 2 in physical page 3

b) List all virtual memory addresses that cause a page fault.



c) What is the physical address for the following virtual addresses?

* 3512 s

3512 🡪 4096 + 3152 = 7248

* 10512

10512 🡪 4096 \* 3 + (10512%4096)

🡪4096\*3 + 2120 = 14408

* 40532

40532 🡪4096\*2 +(40532%4096)

🡪8192 + 2768 = 10960

* 52000

5200 🡪4096\*0 + (52000%4096)

🡪 0 + 1648 = 1648