EEE3096S Tutorial 5

RTXASH001

MLDDZA001

MGGMBA003

Question 1

- FPGAs do not have a fixed hardware structure while a microcontroller does.

Advantages

- Re-programmable
- SRAM based therefore high speed

Disadvantages

- Greater power consumption
- Slow for general purpose operations

Question 2

- A blocking assignment is sequential, it evaluates and updates immediately.
- A non-blocking assignment is parallel, it only updates after evaluating all the statements.
- For the blocking, module, the input 'in' will immediately propagate to 'out'.
- For the non-blocking module, it will take 3 clock cycles for the input 'in' to propagate from q1 to out.

Question 3

Output using port mapping by order:'

A	B	Out
0	1	x

Output using port mapping by name:

- Port mapping by name is the best for large number of ports in a design.