Unit 6 - Week 5

Week 5 Assignment

1) Select the true statement
   - In the Load-Store architecture, all instructions use memory
   - In the Load-Store architecture, instructions use minimal access to memory
   - In the Load-Store architecture, only load and store access memory
   - In the Load-Store architecture, every instruction works using registers

**Accepted Answers:**
In the Load-Store architecture, only load and store access memory

2) Choose the correct formula for Effective Address calculation
   - Base + (Size*Scale) + Displacement
   - (Base + Size)*Scale + Displacement
   - Base + Size*(Scale + Displacement)
   - (Base + Size)*(Scale + Displacement)

**Accepted Answers:**
Base + (Size*Scale) + Displacement

3) TestandSet(V) should be a
   - predicate instruction
   - atomic instruction

**Accepted Answers:**
atomic instruction

4) The main need for the TestandSet(V) instruction is
   - Process switching
   - Task Switching
   - Process Synchronization
   - Cache management
5) Atomicity of the TestandSet(V) is ensured by
   - Software
   - Programming Language
   - Compiler
   - Hardware

6) CMOV is a predicated instruction because
   - It takes less memory
   - It runs only when a condition is satisfied
   - It is an atomic instruction
   - It is an optional instruction

7) RISC Architectures are Load-Store Architectures because of
   - Fixed-Instruction Length
   - Easiness for compiler
   - Less number of instructions
   - Large number of instructions

8) Maximum clique in a register graph is an indicator of
   - Possibility of deadlock
   - Number of registers needed
   - Size of the program
   - Size of cache

9) Register Spilling happens when
   - There are too many registers
   - There are not enough registers
   - The data is larger than the register size
   - There is not enough data to put in memory

Accepted Answers:
- Process Synchronization
- Hardware
- It runs only when a condition is satisfied
- Fixed-Instruction Length
- Number of registers needed
- There are not enough registers