Quiz #3
Monday, October 9th

ALL QUESTIONS ARE MULTIPLE CHOICE:

Circle the correct assembly language implementation of each C assignment statement:

1. `u32 = 0;  // assume: uint32_t u32;`

`LDR  u32,=0`	`LDR  R0,=0` `STR  R0,u32`	`MOV  R0,u32` `MOV  R0,0`	None of the first three.

2. `u64 = (uint64_t) u32; // assume: uint64_t u64; uint32_t u32;`

`LDR  R0,u32`
`STRD  R0,R0,u64`
	`LDRD  R0,R1,u32`
	`STRD  R0,R1,u64`
		`LDR  R0,u32`
		`LDR  R1,=0`
		`STRD  R0,R1,u64`
			None of the first three.

3. `*pu16 = 0;  // assume: uint16_t *pu16;`

`LDR  R0,=0`
`STRH  R0,[pu16]`
	`LDR  R0,=0`
	`LDR  R1,pu16`
	`STRH  R0,[R1]`
		`LDR  R0,=0`
		`LDRH  R1,pu16`
		`STRH  R0,[R1]`
			None of the first three.

4. `*(pu16 + 1) = 0;  // assume: uint16_t *pu16;`

`LDR  R0,=0`
`LDR  R1,pu16+1`
`STRH  R0,[R1]`
	`LDR  R0,=0`
	`LDR  R1,pu16`
	`STRH  R0,[R1,1]`
		`LDR  R0,=0`
		`LDR  R1,pu16`
		`STRH  R0,[R1,2]`
			None of the first three.

5. `s64 = (int64_t) s32;  // assume: int64_t s64; int32_t s32;`

`LDR  R0,s32`
`LDR  R1,=0`
`STRD  R0,R1,s64`
	`LDR  R0,s32`
	`LDR  R1,=-1`
	`STRD  R0,R1,s64`
		`LDRD  R0,R1,s32`
		`STRD  R0,R1,s64`
			None of the first three.

6. `a32[3] = 0;  // assume: int32_t a32[10];`

`LDR  R0,=0`
`ADR  R1,a32`
`STR  R0,[R1,3]`
	`LDR  R0,=0`
	`ADR  R1,a32`
	`STR  R0,[R1,12]`
		`LDR  R0,=0`
		`LDR  R1,a32`
		`STR  R0,[R1,12]`
			None of the first three.

7. `*(ps32 + s32) = 0;  // assume: int32_t s32, *ps32;`

`LDR  R0,=0`
`LDR  R1,ps32`
`LDR  R2,s32`
`STR  R0,[R1,R2]`
	`LDR  R0,=0`
	`LDR  R1,ps32`
	`LDR  R2,s32`
	`ADD  R1,R1,R2`
	`STR  R0,[R1]`
		`LDR  R0,=0`
		`LDR  R1,ps32`
		`LDR  R2,s32`
		`STR  R0,[R1,R2,LSL 2]`
			None of the first three.