

PS-4

1. Problem 3.5.6

A. %esi holds x
 %ebx holds n
 %edi holds result
 %edx holds mask

B. result is -1. mask is 1

C. mask != 0

D. mask gets updated by a left shift with the first byte of n. ie mask = mask << (n%256)

E. result = result ^ (x & mask)

```
int loop (int x, int n)
{
    int result = -1;
    int mask;
    for (mask = 1; mask != 0; mask |= mask << (n%256))
    {
        result ^= x & mask;
    }
    return result;
}
```

2. Problem 3.58

(see next page)

```

int switch3(int *p1, int * p2, mode_t action)
{
    int result = 0;

    switch(action){
        case MODE_A:
            result = *p1;
            *p1 = *p2;
            break;
        case MODE_B:
            *p1 = *p1 + *p2;
            result = *p2;
            break;
        case MODE_C:
            *p2 = 15;
            result = *p1;
            break;
        case MODE_D:
            *p2 = *p1;
            result = 17;
        case MODE_E:
            result = 17;
            break;
        default:
            result = -1;
    }

    return result;
}

```

3. Problem 3.62

A. 13

B. edi and ecx respectively

C.

Couldn't figure out what was going on here.