(1) Assume the PSW contains 5FH and the accumulator contains 19H. What are the contents of the accumulator and the PSW after each of the following instructions?

(a) [2 marks] RLC A

Originally A: 0001 1001, PSW: 0101 1111
RLC A ⇒ A₀ ← C, C ← A₇, Aᵢ ← Aᵢ₋₁
After RLC A: 0011 0010, PSW: 0101 1111

(b) [2 marks] RRC A

Originally A: 0001 1001, PSW: 0101 1111
RRC A ⇒ A₇ ← C, C ← A₀, Aᵢ ← Aᵢ₊₁
After RRC A: 0000 1100, PSW: 1101 1111

(2) [6 marks] Write a piece of code to jump to the label NOTB if the value of the accumulator is not equal to the ascii values of ‘b’ or ‘B’, or jump to ISB if the value is equal to the ascii value of ‘b’ or ‘B’.

A common mistake is to solve the problem as follows:

```
CJNE A, #'B', NOTB
CJNE A, #'b', NOTB
JMP ISB
```

However this code will always jump to NOTB regardless of input, and is therefore incorrect. A correct solution is:

```
CJNE A, #'B', NOTCAPB
JMP ISB
NOTCAPB:CJNE A, #'b', NOTB
JMP ISB
```