

| <u>Instruction</u> | <u>AL Value</u> | <u>Work</u> |
|---------------------------|------------------------|---------------------------------------|
| mov al, 1Ah | 1A | Initial load |
| rol al, cl | 34 | 0001 1010 → 0011 0100 |
| shl al, cl | 68 | 0011 0100 → 0110 1000 |
| mov al, 0D4h | D4 | New load, D4h = 1101 0100 |
| ror al, cl | 6A | 1101 0100 → 0110 1010 (rotated right) |
| shr al, cl | 35 | 0110 1010 → 0011 0101 |
| stc | (CF set to 1) | Carry flag = 1 |
| mov al, 83h | 83 | Load 83h = 1000 0011 |
| rcl al, cl | 07 | Result of rotate through carry left |
| stc | (CF set to 1) | CF remains 1 |
| mov al, 34h | 34 | Load 34h = 0011 0100 |
| rcr al, cl | 9A | Result of rotate through carry right |