# CS 302

## QUIZ 1 ANSWERS

**(a)** *(i) It is an **NFA** since **C** has no outgoing transitions ;(ii) strings with an **even** number of consecutive **0** transitions that **may** or **may not** end up with a single **1** ; (iii) transition fn. table given below*

**(b)** *(i) It is a **DFA** since at each state and for each input there is exactly one outgoing transition (ii) strings that have only **0**'s in it ;(iii) transition fn. table given below*

**(a)**

| state | input | next |
|-------|-------|------|
| > *A | 0 | B |
| A | 1 | C |
| B | 0 | A,C |
| B | 1 | Ø=Null |
| *C | 0 | Ø=Null |
| C | 1 | Ø=Null |

**(b)**

| state | input | next |
|-------|-------|------|
| > *A | 0 | B |
| A | 1 | C |
| * B | 0 | A |
| B | 1 | C |
| C | 0 | C |
| C | 1 | C |