**BRAC University**

**Dept. of Computer Science and Engineering**

**Summer 2024**

**CSE331-07**

**QUIZ - 2(A)**

**Time: 25 minutes Marks: 20**

Name: ID: Section:

1. Give regular expressions for the following languages.
   1. L = { w ∈ {a,b}\* : w contains “abba” as a substring} 6
   2. L = { w ∈ {a,b}\* : the length of w is multiple of 3 or 4’’} 5
   3. L = { w ∈ {0,1}\* : w contains exactly one ‘00’ as a substring} 4
2. Convert the following regular expression over Σ = {0, 1} into an equivalent NFA. Note that R1 + R2 is the same as R1 ∪ R2. 5

01(01\*1+0+11)\* + (1+0)11 + 1\*