Name and surname: **Date: November 28, 2019**

EXAM 7 (duration: 40 minutes)

DatZ1143: Discrete mathematics for computing
Instructor: Abuzer Yakaryılmaz
Autumn 2019

Questions

(There are 5 questions with total 10 points.)

1)Write down all 2-permutations of the set $\{a, b, c, d\}$? (2 points)

2) How many permutations of the letters ABCDEFGH contain the string AD and start with C? (2 points)

3) How many strings of six decimal digits have exactly four digits that are 7s? (2 points)

4) How many **bit strings** of length seven have exactly four 1s? (2 point)

5) How many seven-digit **binary numbers** have exactly four 1s? (2 points)
Remark: 0010, 010, *and* 10 *are the same two-digit binary number.*