

## EXAM 8 (duration: 25 minutes)

DatZ1143: Discrete mathematics for computing

Instructor: Abuzer Yakaryılmaz

Name and surname:

Student number:

Date:

### Questions

(There are 5 questions, 10 points in total.)

1. How many bit strings of length six start with 1 and end with 0? [1 point]
2. How many strings of five decimal digits have exactly four digits that are 7s? [2 points]
3. There are 4 blue, 4 red, and 4 green balls in a bowl. How many balls should I take from to bowl to certainly get a blue ball? [2 points]
4. What are the 1-permutations of the set  $\{a, b, c, d, e, f\}$  [1 point]

5. How many permutations of the letters ABCDEFGH contain the string AC and end with B? [4 points]