Name: _____ **Matriculation Number:** _____

The following test is used to asses your skills. If you cannot answer some of the questions now, this does not mean that you are excluded from the course.

The test is designed so that the points for each task give you a rough indication of how many minutes you should spend on that task (1P $\approx$ 1min).

Notation:

- Numbers: Decimal $(1)_{10}$, Binary $(1)_2$ and Hex $(1)_{16}$
- Boolean Operators: And $= \wedge$, Or $= \vee$, Negation $= \neg$
- Bit Operators: And $=$ &, Or $=$ |, Left Shift $= <<$, Xor $= \oplus$
- Code Samples: All code is written in Python (either in a file or entered into a Python interpreter).
- Python Functions:
  - `__init__(self, ...)` is like Java's constructor function.
  - `__str__(self, ...)` is like Java's `toString()` function.
  - `len(x)` gives the length of list `x`.
  - `range(x)` returns the array `[0, 1, ..., x-1]`.
  - `pow(x, y)` returns the power x^y.

Grading:

Task	1	2	Total
Achieved			
Maximum	2	1	3

Please note: The actual admission test is roughly ten times the size of this mock test and might test similar contents in a different manner.

1 Algebra (2P)

$(7)_{10}$ & $(3)_{10} = (\quad)_{10}$

$(CAFE)_{16} = (\qquad\qquad\qquad\qquad)_2$

2 Programming (1P)

Consider the following code:

```
l = [5, 6, 7, 1]
print(l)
```

What output does this code produce?
