1. True/False. If one uses an “if”, then one must have an “end”.

2. True/False. If the “else” option was removed from MATLAB, one could survive without it (though one’s code might get longer).

3. True/False. the conditional

   \[ \text{if } A>0 \land \land B>0 \]

   is equivalent to the conditional

   \[ \text{if } \neg (A<0 \lor \lor B<0) \]

4. True/False. A for-loop can be nested inside a for-loop but not inside a while-loop.

5. True/False. If a for-loop starts with

   \[ \text{for } i=1:0 \]

   then the body will be executed only once.

6. Consider the following code.

   \[
   \begin{align*}
   \text{var} &= 1; \\
   \text{while } \text{var}<2021 & \\
   \quad & \text{var} = \text{var}+6; \\
   \text{end} \\
   \text{disp} &= \text{var};
   \end{align*}
   \]

   This will print (a) 2017 (b) 2021 (c) 2023 (d) 2025

7. There is a wikipedia article on the discrete logarithm. Which of the following is true?

   (a) Several public-key cryptography algorithms assume the discrete logarithm problem is hard

   (b) Shor provided an efficient quantum algorithm for discrete logarithm

   (c) The discrete logarithm is a special case of the hidden subgroup problem

   (d) All of the above

8. Which of the following is not an algorithm to solve discrete logarithm?

   (a) Diffie-Hellman key exchange

   (b) Number field sieve

   (c) Pollard’s Kangaroo algorithm

   (d) Index calculus algorithm