1. True/False: The concept of “information entropy” was introduced by Claude Shannon.

2. True/False: According to the introduction to the wikipedia article on “Entropy (information theory)”
   “Generally, information entropy is the maximum amount of information conveyed by an event, when considering all possible outcomes.”

3. True/False: Leonard Adleman’s original demonstration of DNA computing involved an instance of 3SAT.

4. According to the introduction to the wikipedia article on “DNA computing”, which of the following does the field include?
   (a) Storage technologies
   (b) nanoscale imaging modalities
   (c) synthetic controllers
   (d) All of the above

5. True/False: A DNA computer has been created to play tic-tac-toe against a human player.

6. PageRank is named after

7. If the following code is executed, what is the value of X at the end?
   \[
   X = \begin{bmatrix} 1 & 2 \end{bmatrix}; \quad X(4) = 4;
   \]
   (a) \[ \begin{bmatrix} 1 & 2 \end{bmatrix} \]
   (b) \[ \begin{bmatrix} 1 & 2 & 4 \end{bmatrix} \]
   (c) \[ \begin{bmatrix} 1 & 2 & 0 & 4 \end{bmatrix} \]
   (d) \[ \begin{bmatrix} 1 & 2 & 4 & 4 \end{bmatrix} \]

8. If \texttt{grid} is a 10 \times 10 2D-array, what does the following code produce?
   \[
   \text{sum( grid(1:5,:) )}
   \]
   (a) A single value that is the sum of the entries in the first 5 rows
   (b) A vector with 5 entries whose entries are the sum of the corresponding row
   (c) A vector with 5 entries whose entries are the sum of the corresponding columns
   (d) A vector with 10 entries whose entries are the sum of the first 5 entries in the corresponding column