CSE 105 Review Quiz 8

This is an "individual" review quiz. You should not discuss questions or share answers with other students in the class. If you are unsure about the correct solution for a question, review the book and the lecture. If you are still unsure, make an educated guess.

Scores translate to participation points as follows:
4 or 5 points = 2 participation points
2 or 3 points = 1 participation points
0 or 1 points = 0 participation points

The deadline is Sunday 11/22 at midnight.

* Required

1. **Email address** *

2. **First name** *

3. **Last name** *

4. **UCSD PID** *

5. **Q1: Which of these are not equivalent to a Turing machine ?** *

   *Mark only one oval.*
   - A turing machine whose tape head must always move to the right.
   - A turing machine with 3 tapes.
   - A push down automata(PDA) with 2 stacks.
   - Lambda calculus (Google this if you don't know what this is)
   - A Non deterministic turing machine.

6. **Q2: Which of these are not equivalent to a two stack PDA ?** *

   *Mark only one oval.*
   - One stack PDA
   - Turing machines
   - Three stack PDA
   - Four stack PDA
7. **Q3**: The collection of decidable languages is not closed under: *

*Check all that apply.*

- [ ] Union
- [ ] Complements
- [ ] Concatenation
- [ ] Intersection
- [ ] Star
- [ ] None of the above

8. **Q4**: Consider the language of \( N = \{<M,w>: M \text{ is a DFA, } w \in L(M)\} \). Then which of the following is true: *

*Mark only one oval.*

- [ ] \( N \) is decidable
- [ ] \( N \) is undecidable
- [ ] \( N \) is both
- [ ] \( N \) is neither

9. **Q5**: Which of the following ordering is true: *

*Mark only one oval.*

- [ ] Regular \( \subseteq \) CFG \( \subseteq \) Decidable \( \subseteq \) Turing recognizable
- [ ] CFG \( \subseteq \) Regular \( \subseteq \) Turing recognizable \( \subseteq \) Decidable
- [ ] Regular \( \subseteq \) CFG \( \subseteq \) Turing recognizable \( \subseteq \) Decidable
- [ ] Undecidable \( \subseteq \) Unrecognizable \( \subseteq \) Non CFL \( \subseteq \) Non regular