CS208 Practice Problem Set 4

These problems are from "Introduction to Automata Theory, Languages and Computation" by Hopcroft, Motwani and Ullman (2nd edition, should work for 3rd edition as well).

1. **Context-free grammars**
   Exercises 5.1.2(b), 5.1.4, 5.1.7, 5.2.3, 5.4.7(a), 7.1.3, 7.1.4

2. **Pushdown Automata**
   Exercises 6.2.1(b), 6.2.7, 6.3.2, 6.3.5, 6.4.2, 6.4.4

3. **Pumping Lemma and closure properties for CFLs**
   Exercises 7.2.1(b) and (f), 7.2.3, 7.3.2, 7.3.4(a), (d) and (e)

4. **Turing Machines** Exercises 8.2.1(c), 8.2.2(c), 8.2.5(b) and (c), 8.3.2, 8.4.3(c), 8.4.6, 8.4.9, 8.5.1(b) and (d)