

CS341 Artificial Intelligence and Machine Learning – Fall 2018
Exam 2 – Review

1. Chapter 7 – Logical Agents
 - (a) Wumpus world!
 - (b) Propositional Logic
 - i. syntax and semantics
 - ii. inference rules
 - iii. drawbacks
 - (c) Logical inference methods
 - i. valid, satisfiable, unsatisfiable sentences
 - ii. Horn form and CNF
 - iii. model checking methods
 - iv. deduction systems
 - (d) Logical Agents
 - i. hybrid
2. Chapter 8 – First Order Logic
 - (a) Syntax and semantics
 - (b) Quantifiers
 - (c) Set and Wumpus world examples
3. Chapters 9 – Inference in FOL
 - (a) Conversion to propositional logic
 - i. new inference rules
 - ii. substitution lists and unification
 - (b) Generalized Modus Ponens
 - i. forward and backward chaining
 - ii. drawbacks of GMP
 - (c) Resolution and proof by contradiction
 - i. lifted version of resolution
 - ii. general conversion to CNF
 - iii. resolution strategies
4. Homework