## CIS 471/571 (Winter 2020): Introduction to Artificial Intelligence

Lecture 20: Exam Review

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Source: http://ai.berkeley.edu/home.html

#### Time and Location

- ■Time: 8 am 10 am (120 minutes), March 19th, 2020
- Location: Take-home exam
- Calculator
- Submission: on Canvas
- •You have 30 minutes after the exam period to upload your answers.

# Topics

- Search
- Adversarial search
- •Reinforcement learning
- Bayes Nets
- Hidden Markov models

## Graph Search

- Uninformed search
  - UCS
- Informed search
  - Greedy
  - A\*
  - Admissibility and consistence

 $_{20}$   $\left(4\right)$ 

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### Adversarial Search

Minimax search

Alpha-beta pruning

 $_{20}$  (5)

## Reinforcement Learning

- Direct evaluation
- •Q-learning
- Exploration

## Bayes Nets

- Independence
  - D-separation

- Inference
  - Variable elimination

- Sampling
  - Gibbs sampling

#### Hidden Markov Models

•Forward Algorithm



#### Midterm Winter 2019

#### •Link:

https://classes.cs.uoregon.edu/19W/cis471/homework/Midterm\_Solution.pdf