Quiz #6. Probabilistic reasoning

How can we solve problems using search if environment is partially observable?

What is a belief state?

How can we do planning, if actions are non-deterministic?

What is the major disadvantage of logical agent when handling uncertainty?

What is the relation between event and possible world?

Why is a random variable?

When and where can we use normalization?

What are the disadvantages of using full joint probability distribution?

How do we calculate probabilities **P**($P_{1,3}$, unknown, known, b) in the full joint probability distribution for the Wumpus world? (slide 9)

What are the only two possible values of probabilities **P**(b | $P_{1,3}$,known, fringe) in the Wumpus world? Why? (slide 11)

What is the practical difference between causal and diagnostic direction?

What is the relation between chain rule and product rule?

How does a Bayesian network represent full joint probability distribution?

Why are there arcs MaryCalls -> JohnCalls and Burglary -> Earthquake in the Bayesian network at slide 16?

Can we construct Bayesian network for any order of random variables?

What is the disadvantage of the enumeration method for inference in Bayesian networks?

How can we obtain factors from conditional probability tables?

Apply the variable elimination method to the Bayesian network for burglary case (slide 14) to answer query P(Alarm | JohnCalls=yes, MarryCalls=no).

How can we calculate the area of an irregular 2D object using a Monte Carlo technique?

What is a sample for a give Bayesian network?

What is the difference between rejection sampling and likelihood weighting?