# AI Quiz 3

* Required

Name and Roll Number *

Your answer

How many parameters are required to be estimated in a Q-learning algorithm in a world consisting of S states and A different actions? * 1 point

- O(S, A)
- O(S)
- O(A)
- O(AS)

Which of the following is correct for model-based and model-free reinforcement learning? * 1 point

- Model-based reinforcement learning requires more parameters and data to learn
- Model-free learning can simulate new episodes from the past expereince
- Model-free learning can exploit the uderlying MDP structure
- All the above are correct

Which of the following strategies can be adopted for managing exploration in Q-learning? * 1 point

- Random action with probability p and greedy actions with probability 1-p
- Performing actions that have been performed less with lesser probability
- Maximizing exploration function where an exploration term is added to the exploitation term
- None of the above can be used

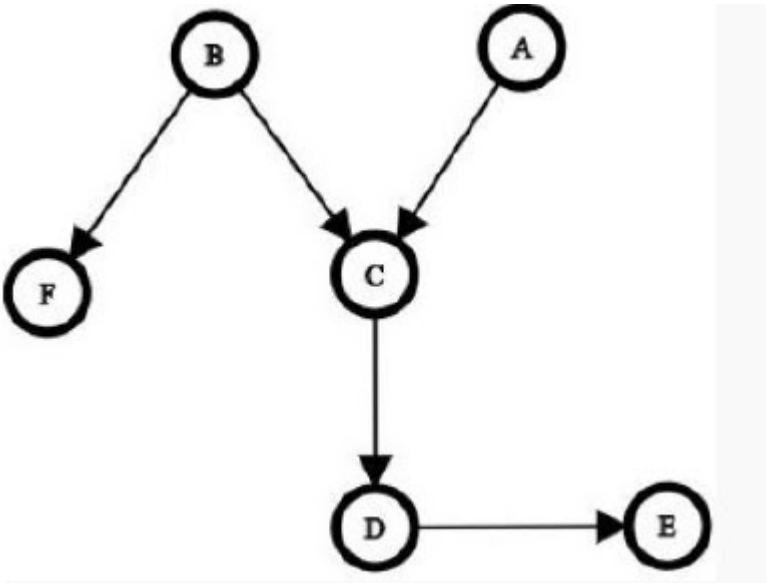
Which of the following is the property of MDP? * 1 point

- Reward function and state transition function are independent of all the states
- Reward function and state transition function depends only on current state
- Reward function and state transition function depends on all the previous states
- Reward function and state transition function depends on all the future states

In reinforcement learning, zero discount factor implies that * 1 point

- Rewards from all states are equally weighted
- Rewards from future distant states are considered
- Rewards from past states are considered
- Reward from immediate state are considered

Consider the following Bayesian Network in all the subsequent questions




Given the evidence about C, which of the variables are conditionally independent? * 1 point

- A and B
- A and F
- A and D
- A and E

Which of the following variable is in Markov blanket of F? * 1 point

- A
- B
- C
- D

How many parameters are required to represent the above Bayesian network if all variables are boolean? * 1 point

Your answer

Suppose X and Y are conditionally independent of Z. Then which of the following are correct? * 1 point

- P(X, Y) = P(X).P(Y)
- P(X, Y, Z) = P(X|Y, Z).P(Y|Z).P(Z)
- P(X, Y, Z)=P(X|Z).P(Y|Z).P(Z)
- P(X, Y | Z) = P(X|Z).P(Y|Z)

The process of summing over hidden variables in order to answer a query from Bayesian network is called * 1 point

- Enumeration
- Conditioning
- Fitting
- Elimination

Submit