

질문 1

0 / 1 pts

Consider a domain with 5 Boolean random variables. How many independent entries does a joint distribution over the 5 variables have in general?

Correct Answer

- ☐ 31
- ☐ 32
- ☐ 15

You Answered

- ☒ 10

질문 2

1 / 1 pts

Mark all statements below which are always true.

Correct!

☒  $P(A|B) = \frac{P(A)P(B|A)}{P(B)}$

Correct!

☒  $P(A|B) + P(\neg A|B) = 1$

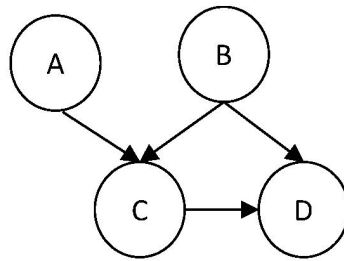
☐  $P(A|B) + P(A|\neg B) = 1$

☐  $P(A, B) = P(A)P(B)$

질문 3

0 / 1 pts

Mark all assertions which are true with respect to this Bayesian network.



You Answered

☐  $I(A, D|B)$

☒  $I(A, D|C)$

☐  $I(A, B|D)$

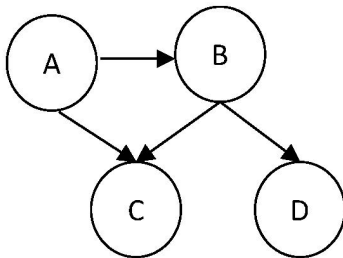
Correct!

☒  $I(A, D|B, C)$

질문 4

0.5 / 1 pts

Which of the following equations correctly represent  $P(A|D)$  based on the Bayesian network given below?



Correct Answer

☐  $\alpha \sum_b P(b|A)P(D|b)$

Correct!

☒  $\alpha \sum_b P(b|A) \sum_c P(c|A, b)P(D|b)$

☐  $\alpha \sum_c P(c|A)P(D|c)$

☐  $\alpha \sum_b P(A|b) \sum_c P(c|A, b)P(b|D)$

질문 5

1 / 1 pts

Which of the following claims are true with respect to a Bayesian network?

☐ A node is independent of its descendants given its parents.

Correct!

☒ A node is independent of all its other ancestors given its parents

Correct!

☒ A node is independent of all other nodes given its Markov blanket, i.e., parents, children and children's parents

☐ A node is independent of its parents given its children