

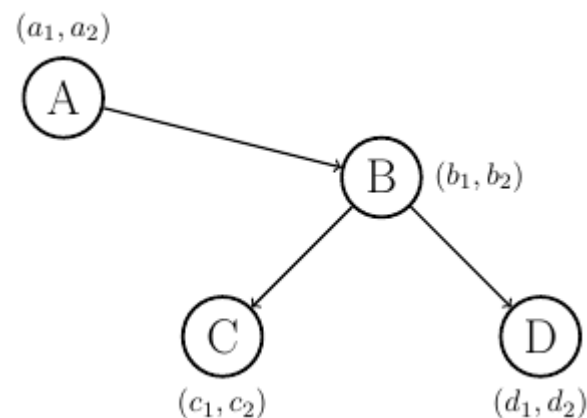
Bayesian network

Total points 1/5

The respondent's email (**m22cs060@iitj.ac.in**) was recorded on submission of this form.



✗ Consider the Bayesian Network in the following figure, where each of the stochastic variables A, B, C, D can assume two values each. Which of the variable pairs are conditionally independent according to the network? *0/1



- ☐ A and C, given B and D
- ☐ A and D, given B and C
- ☒ C and D, given A and B
- ☐ B and C, given A and D



Correct answer

- ☒ A and C, given B and D
- ☒ C and D, given A and B
- ☒ A and D, given B and C



✓ What is number of independent entries in the Conditional Probability Table for the above Bayesian Network *1/1

☐ 8

☐ 16

☒ 7

☐ 4



✗ Consider 3 stochastic binary variables A, B and C, the states of which are ^{*0/2} represented by (a, !a), (b, !b) and (c, !c) respectively. The joint probability distribution of these variables is shown below. Which of the following statements is true?

Joint Probability Distribution

$P(a, b, c)$	=	0.252
$P(a, b, !c)$	=	0.224
$P(a, !b, c)$	=	0.108
$P(a, !b, !c)$	=	0.096
$P(!a, b, c)$	=	0.168
$P(!a, b, !c)$	=	0.056
$P(!a, !b, c)$	=	0.072
$P(!a, !b, !c)$	=	0.024

- ☐ The variables A and C are conditionally independent
- ☒ Given B, the variables A and C are conditionally independent ✗
- ☐ None of the above

Correct answer

- ☒ None of the above



✗ Consider yourself as a bird-watcher. You see a green bird which can be one of three species: parrot, green-barbet, and bee-eater. You will examine the different features of the bird in detail to identify it. Your "prior belief" in the species of the bird will be determined by *0/1



- ☒ Your knowledge about the appearance of the birds, e.g. shape of the tail, length of the beak, etc. ✗
- ☐ It is an arbitrary and intuitive value
- ☐ Context, such as locality, season, etc.



☐ The observed features of the bird, e.g. shape of the tail, length of the beak, etc.

Correct answer

☒ Context, such as locality, season, etc.

This form was created inside of Indian Institute of Technology Jodhpur.

Google Forms





