Answer All Questions

Information

6.(A)

Question **1**

Not yet answered

Marked out of 13.00

Consider a classification problem as given in Dataset

Example No	Color	Type	Origin	Stolen?
1	Red	Sports	Domestic	Yes
2	Red	Sports	Domestic	No
3	Red	Sports	Domestic	Yes
4	Yellow	Sports	Domestic	No
5	Yellow	Sports	Imported	Yes
6	Yellow	SUV	Imported	No
7	Yellow	SUV	Imported	Yes
8	Yellow	SUV	Domestic	No
9	Red	SUV	Imported	No
10	Red	Sports	Imported	Yes

(i) Classify whether a Red, Domestic and SUV model cell will be stolen or not using Bayes rule.

(II) Classify whether a yellow, sports, imported model will be stolen or not using Bayes rule

Information

(OR)

Information

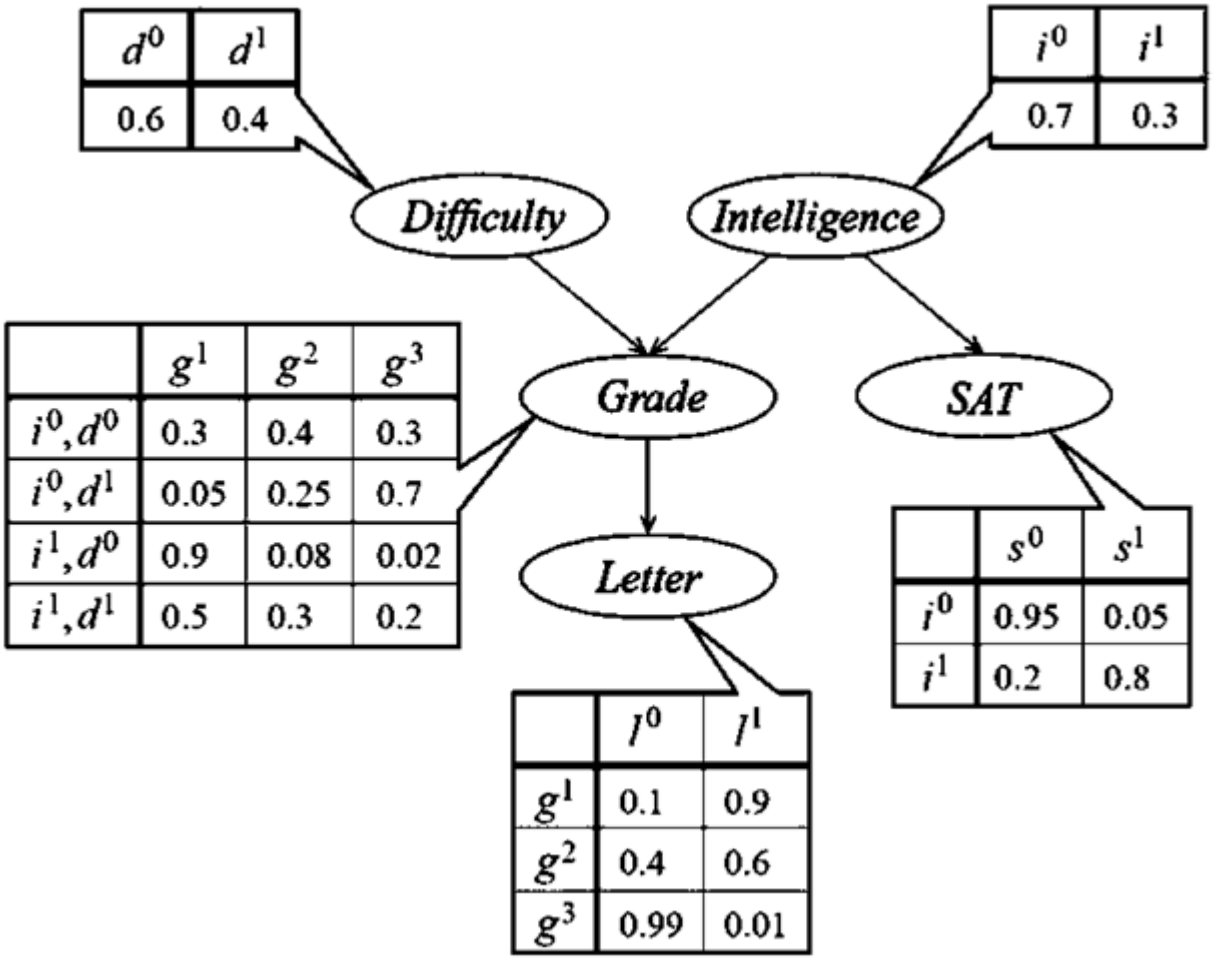
6.(B)

Question **2**

Not yet answered

Marked out of 13.00

For the following Bayesian Network 'Student Model'



d^0	d^1
0.6	0.4

i^0	i^1
0.7	0.3

	g^1	g^2	g^3
i^0, d^0	0.3	0.4	0.3
i^0, d^1	0.05	0.25	0.7
i^1, d^0	0.9	0.08	0.02
i^1, d^1	0.5	0.3	0.2

	s^0	s^1
i^0	0.95	0.05
i^1	0.2	0.8

	l^0	l^1
g^1	0.1	0.9
g^2	0.4	0.6
g^3	0.99	0.01

(i) Calculate the joint probability P (d=0, i=1, g=2, s=0, l=1).

II)Determine the probability P (i=1, g=2, s=0, l=1) regardless of the value of difficulty (d).

Information

7.(A)

Question **3**

Not yet answered

Marked out of 13.00

Illustrate Dynamic Bayesian network for a Temporal Model. Discuss on the Inference in DBN.

Information

(OR)

Information

7.(B)

Question **4**

Not yet answered

Marked out of 13.00

Elucidate the Hidden Markov Model with an example to identify the sequence of hidden states.

Information

8.(A)

Question **5**

Not yet answered

Marked out of 14.00

Given the following dataset:

Person	Height (ft)	Weight (lbs)	Foot size (inches)
Male	6.00	180	12
Male	5.92	190	11
Male	5.58	170	12
Male	5.92	165	10
Female	5.00	100	6
Female	5.50	150	8
Female	5.42	130	7
Female	5.75	150	9

Determine the gender of a person having height 6.0 ft., weight 130 lbs, and foot size 8 inch. using Naïve Bayes algorithm.

Information

(OR)

Information

8.(B)

Question **6**

Not yet answered

Marked out of 14.00

Determine whether you can **play or not** for **(outlook=overcast, temperature=60, humidity=62, windy=false)** given the following dataset using Naïve Bayes Rule.

DAY	OUTLOOK	TEMP	HUMIDITY	WIND	PLAY TENNIS
D1	Sunny	85	85	False	No
D2	Sunny	80	90	True	No
D3	Overcast	83	86	False	Yes
D4	Rainy	70	96	False	Yes
D5	Rainy	68	80	False	Yes
D6	Rainy	65	70	True	No
D7	Overcast	64	65	True	Yes
D8	Sunny	72	95	False	No
D9	Sunny	69	70	False	Yes
D10	Rainy	75	80	False	Yes
D11	Sunny	75	70	True	Yes
D12	Overcast	72	90	True	Yes
D13	Overcast	81	75	False	Yes
D14	Rainy	71	91	True	No