Sore throat	Fever	Dyspnea	Sneezing	Headache	Diagnosis
Yes	Yes	Yes	Yes	Yes	COVID
No	No	No	Yes	Yes	ALLERGY
Yes	Yes	No	Yes	No	COLD
Yes	No	Yes	No	No	COVID
No	Yes	No	Yes	No	COLD
No	No	No	Yes	No	ALLERGY
No	No	Yes	No	No	COVID
Yes	No	No	Yes	Yes	ALLERGY
No	Yes	No	Yes	Yes	COLD
Yes	Yes	No	Yes	Yes	COLD
Yes	No	Yes	No	Yes	??

		COVID	ALLERGY	cold
Sore throat	Yes	2/3 = 0.66	1/3 = 0.33	2/4 = 0.5
	No	1/3 = 0.33	2/3 = 0.66	2/4 = 0.5
Fever	Yes	1/3 = 0.33	0/3 = 0	4/4 = 1
	No	2/3 = 0.66	3/3 = 1	0/4 = 0
Dyspnea	Yes	3/3 = 1	0/3 = 0	0/4 = 0
	No	0/3 = 0	3/3 = 1	4/4 = 1
Sneezing	Yes	1/3 = 0.33	3/3 = 1	0/4 = 0
	No	2/3 = 0.66	0/3 = 0	2/4 = 0.5
Headache	Yes	1/3 = 0.33	2/3 = 0.66	2/4 = 0.5
	No	2/3 = 0.66	3/0 = 0.3	4/10 = 0.4
Prior Probability		3/10 = 0.3	3/10 = 0.3	4/10 = 0.4

Diagnosis : <u>Covid</u>

$0.3 \times 0.66 \times 0.66 \times 1 \times 0.66 \times 0.33 = 0.02846$

Diagnosis: <u>Alergy</u>

$0.3 \times 0.33 \times 1 \times 0 \times 0 \times 0.66 = 0$

Diagnosis : <u>Cold</u> →

$0.4 \times 0.5 \times 0 \times 0 \times 0 \times 0.5 = 0$

The largest value for Diagnosis is
COVID.