Question 1: Probability [20]

a) [4] 2 points for correct questions, 2 points for correct probability value.
b) [4] 2 points for correct questions, 2 points for correct probability value.
c) [4] 2 points for correct questions, 2 points for correct probability value.
d) [4] 1 point for right conclusion, 1 points for right judging equation. 1 points for each probability for each side of the equation.
e) [4] 1 point for right conclusion, 1 points for right judging equation. 1 points for each probability for each side of the equation.

Directed Graph [30]

a) [6] 3 points for $P(L = T)$ and $P(L = F)$ and 3 points for $P(Th = T)$

b) [6] 3 points for $P(Th = T ∧ Ff = T)$, 2 points for $P(Ff = T)$, 1 points for $P(Th = T|Ff = T)$

c) [6] 3 points for $P(S = T ∧ Th = T)$, 3 points for $P(S = T|Th = T)$

d) [6] 3 points for $P(Cf = T ∧ Th = T)$, 3 points for $P(Cf = T|Th = T)$

e) [6] 3 points for right equation, 3 points for computation.

Question 3: Programming Naive Bayes Classifiers [50]

1. [10] Code only compiles correctly but throws exception

2. [30] Incorrect log probability and accuracy for any of the test cases

3. [40] Incorrect log probability for all test cases. But accuracy matched for some

4. [40] Incorrect output for most of the test cases

5. [45] Accuracy was correct for all test cases but log probability did not match for some cases

6. [50] All outputs matched for all test cases