PART A:

- No understanding of the nature of parameters a and b (1.3)

- Poor understanding on how the parameters express our prior belief (1.3)

- Insufficient explanation for 1.4

PART B:

- Not running the model after giving evidence, so result not calculated.

- Hypothesis is not 50 - 50 for shaved heads and shaved tails

- Lack of explanation on the properties

- Putting evidence on the hypothesis rather than entering evidence (2.2)

- Confusion between the nodes p(Head) and Head

PART C:

- Believing that 2:1 is referring to the parameters a and b (a=2, b=1) and not the prior belief about the hypothesis (3.1)

- Not understanding that number of trials is one for benoulii (3.2)

- Not attended (most of the times) or confusion on the BN structure for Bernoulli trials (3.4)

Note that many of the coursework submitted alternative BN structures that provided different answers. Where this occurred, and even if the BN was wrong, we only penalised the coursework once for the wrong model and not for any subsequent answers derived from it.

The most frequent alternative model had nodes for p(head) and p(tail) and #heads and #tails. At first sight this looks fine but what this actually means is that by ‘doubling up’ you are effectively doing twice the number of trials than you actually had. This means that the end result was much more confident than it should have been (i.e. lower variance). We didn’t penalise this approach – easy mistake to make and it does actually work with this structure if you don’t put any observation into the #tail node.