R00944042

1. [a]
Because (i) can be solved by well defined mathematical techniques. And (iii) can be calculated by applying physical laws (techniques). Yet the (ii),(iv),(v) are all complicated systems. Meanwhile they all can derive large (enough) data and show possible hidden patterns, thus as the ML is an alternative route to handle that, so they are best suited for ML.

2. [b]
In this question, the input data labels are partially informed, because what we know is only the user feedback.

3. [c]
This question has a background hypothesis that we do not know any (or very little) other former unusual purchasing behavior in the data library, because logically unusual behaviors may look so different and are usually so seldom. Otherwise, the question can be treated as a supervised learning problem I think. But given the word meaning of the “finding” and “unusual”, I think unsupervised learning is a better answer. Because anyway, there are no data labels here, and the problem can be categorized as clustering problem in my opinion.

4. [b]
Learning to play music is usually graded by how well (or badly) the play is. Considering the fact that due to the lack of standard, feedback (partial information) is employed most of time in this question. So I think reinforcement learning is the answer here.

5. [a]
The input data are well labeled (according to the bank records), unlike the reinforcement learning (partial information) or unsupervised (no label), so the problem may be solved by supervised learning.