- 1. **False**, this question is mutually exclusive with the second one, please refer to the explanation below for the reason why this one is a false statement.
- 2. **True**, since NP-complete is a complexity class which represents the set of all problems in NP for which it is possible to reduce any other NP problem to the ones in NP in polynomial time. Therefore, they, the problems in NP-complete class, can be solved in polynomial time if any problem in NP class can be solved in polynomial time.
- 3. **True**, since any NP-complete problem can be reduced to any other NP-complete problem in polynomial time, all NP-complete problems can be reduced to any NP-hard problem in polynomial time. Then, if there is a solution to one NP-hard problem in polynomial time, there is a solution to all NP problems in polynomial time.