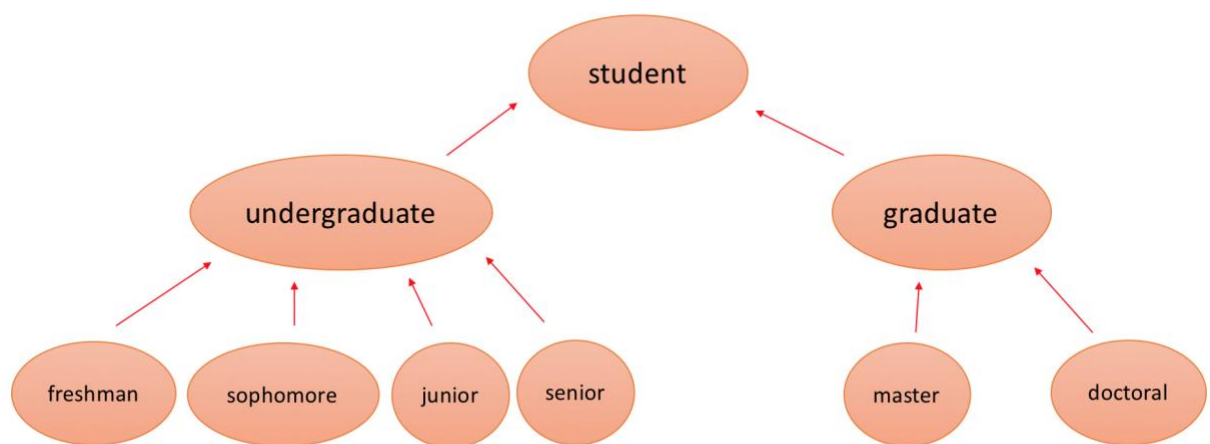**1.**

(1) true

(2) false, "is-a" relationship represents "inheritance"; "has-a" relationship represents "composition"

(3) false, it should be "has-a", not "is-a" relationship.

(4) true

(5) true

2.

This hierarchy is an inheritance, which is a "is-a" relationship.

A derived class can take all of the features of its base class. However, a base class cannot possess all of its derived classes' features.

For example, we can say that "freshman" is an "undergraduate" and a "student". However, we cannot say a "student" is an "undergraduate", because a "student" can also be a "graduate". Likewise, we cannot say an "undergraduate" is a "freshman", because an "undergraduate" can also refer to a "sophomore", a "junior" or even a "senior".