Question 2:

Clearly, we can have different configurations of PCs, for example a tower PC and a desktop PC. Furthermore, each type of PC may require specific components. We may have, for instance, specific cabinets and chassis for tower PCs and desktop PCs. Consequently, we assume that we will have a family of different products. There are actually two concerns here. First, we would like to ensure that a computer configuration always consists of parts that fit together. Second, we would not like to be bothered with details of the creation of computers.

Which design pattern would be suitable for this problem?

Solution:

The modular design persists in the 2nd assignment. But along with that, there are additional requirements. Firstly, making sure that correct parts are clubbed together. Secondly, there needs to be a layer of abstraction in the creation. The assigner wouldn't like to be "bothered with details of the creation of computers."

Here, a blend of **factory pattern and builder pattern** would suit well. The addition of using factory pattern means the implementation details are well abstracted.