Here are the questions from [8.1 An introduction to particle filtering - Quiz]

1. Why can we often assume to know the true state in a Particle Filter (PF) while this is not true for, e.g., Gaussian filters? Compared to the other filters, the particle filters…

Optional Answers:

1. …has no uncertainty in the state (only in the measurements), hence, we will know the true state.
2. …approx. densities using a set of concrete state hypothesis (particles) and their assoc. probability (weights) which we can condition on.
3. …do not use a motion or measurement model, hence, we do not need to assume to know the true state.

Thank You