

Question 1: Explain 'the dual process model' in making clinical diagnosis.

The model is a cognitive process that physicians use when making clinical diagnosis. It consists of two systems, system 1 and system 2. System 1 is the use of pattern recognition, known as heuristics, to make quick, almost instantaneous decisions. System 2 is the more analytic approach to problem solving and is typically employed when confronted with an unfamiliar problem. The two systems function in sequence.

Question 2: The authors state that 'errors may arise simply due to the expediency of depending on heuristics'. Why do physicians not always use system 2?

Because system 2 requires effort in addition to an understanding of and the ability to engage in hypothetico-deductive and/or inductive reasoning.

Question 3: Explain the difference between the 'routine expert' and 'adaptive expert'.

The *routine expert* is an individual at any level of training who appropriately uses preexisting knowledge to quickly solve routine, familiar, or uncomplicated problems. In contrast, the *adaptive expert* is able to employ a deep conceptual understanding and engage in reflection to create novel solutions for complicated or unfamiliar problems, thus adding to his or her knowledge base, reasoning capacity, and ability to solve cases not previously encountered.

Question 4: What is required to be the adaptive expert in the expert practice theory. And why is it required?

Reflection for growth is required. Because without engagement in this metacognitive process, practice improvement is stalled, and the chance of diagnostic errors occurring increases.

Question 5: Explain the cognitive bias of premature closure.

Premature closure is one of the cognitive biases in which physicians tend to accept an early impression as the diagnosis without adequate verification or consideration of other explanations.

Question 6: What are the examples of 'red flags' in which the interaction between heuristics

and cognitive bias may lead to diagnostic error?

Such as the failure to generate more than one possible diagnosis and the failure to account for all the data.