

PSYCHOLOGY 452 FINAL EXAM
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Part I: Choose any *TEN* of the following terms, and write a short (2-3 sentence) definition for each. The definition should indicate what the term means, and should also indicate why the term is important to or of interest to cognitive science. Remember, *ONLY 10 DEFINITIONS* are required. Each definition is marked out of 3 points.

“Band” Of A Value Unit	Definite Binary Feature	Local Representation
Hidden Unit Space	Synthetic Psychology	Parable of the Ant
Emergence	Coarse Coding	Goodness Of Fit
Hidden Unit	Jittered Density Plot	Definite Unary Feature

Part II: Choose any one of the following questions, and write a short answer (3-4 pages) for it. Make sure that your answer is clear and concise, and also make sure that you deal with the question directly. Your answer will be marked out of 35 points.

1. Discuss the relevance of artificial neural networks in the context of the following quote, illustrating your answer with relevant examples: “Connectionism appears to have fatal limitations. The problem with Connectionist models is that all the reasons for thinking that they might be true are reasons for thinking that they couldn’t be *psychology*” (Fodor & Pylyshyn, 1988, p. 48).
2. Discuss the process of interpreting artificial neural networks in the context of the following quote, illustrating your answer with relevant examples: “If the purpose of simulation modeling is to clarify existing theoretical constructs, then connectionism looks like exactly the wrong way to go. Connectionist models do not clarify ideas, they obscure them” (Seidenberg, 1993).
3. Discuss artificial neural networks as a medium for conducting synthetic psychology in the context of the following quote, illustrating your answer with relevant examples: “A man, viewed as a behaving system, is quite simple. The apparent complexity of his behavior over time is largely a reflection of the complexity of the environment in which he finds himself” (Simon, 1981, p. 65).