

ELL788: Minor Test I

August 30, 2016

Maximum Marks: 25

1. (a) What is meant by *declarative* and *procedural* knowledge? Give examples of the kinds of representation that correspond to each of them. [2]
(b) Suppose you are playing football. Give 3 instances each of declarative and procedural knowledge that might be used while doing so. (Hint: It may help to think about what pieces of knowledge you would want to program into a football-playing robot.) [3]
2. (a) Describe the Mind-Body problem. [2]
(b) How does functionalism claim to solve the Mind-Body problem? Explain why functionalism is particularly appealing to cognitive scientists. [3]
3. What does dorsal mean, and what is its opposite? [1]
4. If the two structures are both on the left side of the body, they are _____ to each other. If one is on the left and the other is on the right, they are _____ to each other. [1]
5. Suppose the threshold of a neuron were the same as the neurons resting potential. What would happen? At what frequency would the cell produce action potentials? [0.5+0.5]
6. How does myelin increase the velocity of the action potential? In addition to myelin, name another structure in the nervous system which helps in rapid propagation of the action potential. Briefly describe the mechanism of these structures for fast movement of the action potential. [1+0.5+2]
7. What is the basic criterion for a neuron to fire? Explain briefly. Describe the basic principle of action potential generation with a diagram. [1+3+2]
8. Name the anatomical areas connected by the Arcuate Fasciculus (AF). If the AF is damaged, what would happen to a person? [0.5+1]
9. What is the functional specialization of the thalamus and what is its exception? [0.5+0.5]