D-277 Dental Physiology Quiz 2
Thursday, May 8, 2008

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Name Student Number

1. A group of photons strikes only the "ON CENTER" in the "On center, Off surround" circuit, what happens in the horizontal cells ?

   a. *Maybe some repolarization but not too much as the horizontal cells are still being stimulated with glutamate from the cones in the "OFF SURROUND".
   b. They hyperpolarize and secrete their transmitter agent, GABA.
   c. They depolarize and cease secretion of their transmitter agent, GABA.
   d. They stimulate the cones in the "ON CENTER" to depolarize.

2. The most important function of the CNS circuitry is __1__ in order to enable __2__.

   a. 1. = excitation 2. = Increased alertness
   b. *1. = inhibition 2. = Prioritization
   c. 1. = inhibition 2. = Increased alertness
   d. 1. = excitation 2. = Prioritization

3. Which one of the following statements is **true or correct** ?

   a. General sensory perception increases in a monotonic fashion in response to increased stimulus intensity (a 10 unit increase in stimulus intensity is perceived as a 10 unit increase in perception of the stimulus).
   b. It takes only 1 sensory generator potentials to generate an action potential in nerves of the CNS.
   c. *When tension on the tip links of the hair cells of the left and right semi circular canals becomes unequal, nystagmus will occur.
   d. The level of perception of a painful stumulus remains constant (doesn't h=urt more and doesn't hurt less) over time.

4. The response from a receptor being stimulated by a long duration, constant intensity stimulus is considered to be a **phasic** receptor when:

   a. The frequency of action potentials generated in that nerve remain constant.
   b. *The frequency of action potentials generated in that nerve becomes lower.