

PHYSIOLOGY 451/551
CELLULAR NEUROSCIENCE EXAMINATION
VERSION 1
MONDAY, OCTOBER 17, 2016

INSTRUCTIONS

This examination consists of 25 questions, 7 pages (including this cover page). Please check that your copy has all pages.

Print your name and 8-digit UB person number on the answer sheet.

Mark your answers carefully on the answer sheet with a #2 pencil.
If you erase, do so completely.

You may keep the examination.
Results and answer keys will be posted as soon as possible on UBLearns.

WE DO NOT ANSWER QUESTIONS DURING THE EXAMINATION.

We need to see your UB ID card.

If you have forgotten your card, please bring it to the Department Office (124 Sherman) within 24 hours.

TO PREVENT CHEATING ON EXAMS

Keep your answer sheet covered.

Please inform one of the instructors if you suspect someone is cheating; (your comments will be kept confidential).

Turn off all cell phones.

BE SURE TO FILL IN TEST VERSION NUMBER ON THE SCANTRON

On side two of your answer sheet (Scantron) there is a "Grade or Education" box below the "Identification box" where you add your student person number. In this box, fill in the appropriate version number. If you do not add your exam version you will receive a zero (0) for this exam. If you fill in the WRONG number, you will be scored for the number you fill in. If you fill in the wrong number, it cannot be changed after you turn in your exam.

BE ON TIME.

No one will be allowed to start the exam after 11:20 am.

1. The hippocampus is critical for
 - A. coordination.
 - B. vision.
 - C. memory.
 - D. analyzing input from Ib fibers.
 - E. the phenomenon of referred pain.

2. A person with a complete section of the right optic nerve would lose
 - A. the right visual field in the left eye.
 - B. all vision in the right eye.
 - C. color vision in both eyes.
 - D. the left visual field in the left eye **and** the right visual field in the right eye.
 - E. the upper left quadrant of the visual field in both eyes.

3. A person with a pituitary tumor that destroyed all optic nerve fibers crossing the midline in the optic chiasm (and only those fibers) would lose
 - A. both halves of the visual field in the left eye.
 - B. both halves of the visual field in the right eye.
 - C. the left half of the visual field in the left eye and the right half of the visual field in the right eye.
 - D. both monocular crescents.
 - E. the entire binocular visual field.

4. The periaqueductal gray (PAG) is in
 - A. the medulla.
 - B. the thoracic spinal cord.
 - C. the pons.
 - D. the midbrain.
 - E. the occipital lobe.

5. "Tubes" in the ears are used to treat
 - A. tinnitus.
 - B. presbyopia.
 - C. cataracts.
 - D. otitis media.
 - E. age-related hearing loss.

6. If an extensor muscle contracts there will be

- A. a decrease in joint angle and an increase in the length of that muscle.
- B. an increase in joint angle and a decrease in the length of that muscle.
- C. a decrease in joint angle and a decrease in length of that muscle.
- D. an increase in joint angle and an increase in length of that muscle.
- E. a decrease in length of its antagonist.

7. In ALS there is

- A. an increase in relative numbers of FF fibers.
- B. a decrease in the size of motor units in postural muscles.
- C. loss of trophic factors and muscle atrophy.
- D. a painful rash with blisters.
- E. a complete loss of S fibers.

8. The eighth cranial nerve

- A. controls movements of the eyes in the orbit.
- B. is critical for pain-temperature information from the face.
- C. is the olfactory nerve.
- D. carries auditory and vestibular information.
- E. carries information about taste.

9. Bradykinin is thought to

- A. be one of the mediators of pain transduction.
- B. be the transmitter used by the neurons of the locus ceruleus.
- C. be the transmitter used by the second-order neurons of the dorsal horn.
- D. be the transmitter used by neurons of the raphe magnus.
- E. be the transmitter used at the neuromuscular junction.

10. The cerebellum influences movement

- A. via the cerebellospinal tract.
- B. via relays in the locus ceruleus.
- C. via relays in the lateral geniculate nucleus.
- D. via relays in the brainstem.
- E. via its projections to the medial geniculate nucleus.