

Subject : Anatomy

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DPT 4th Semester

MidTerm Assignment, Spring 2020.

Total marks: 30.

Select the best possible answer.

1. Sub arachnoid hemorrhage is caused by the rupture of which vessel?

c. cerebral artery

2. The superior sagittal sinus is located between the?

b. endosteal (parietal) and the meningeal (visceral) layers of the dura

3. How many poles does a cerebrum has?

c. 3 poles

4. What type of cells is present in the fifth layer of cerebral cortex

d. Both b & c

5. A fetal origin posterior communicating artery arises from the?

a. basilar artery

6. Regarding sympathetic and parasympathetic nervous system, which of the following is true?

b. Long preganglionic fibers and short postganglionic fibers in PSNS.

7. Sensory information enters the CNS via the dorsal portion, Motor commands exit the CNS via the ventral portion.

a. True

8. Which of the following regarding taste area is true?

c. both a & b.

Questions 9-11 are related to the figure 1, given below. Question number 9, 10 carries 1 mark each. Question number 11 carries 5 marks.

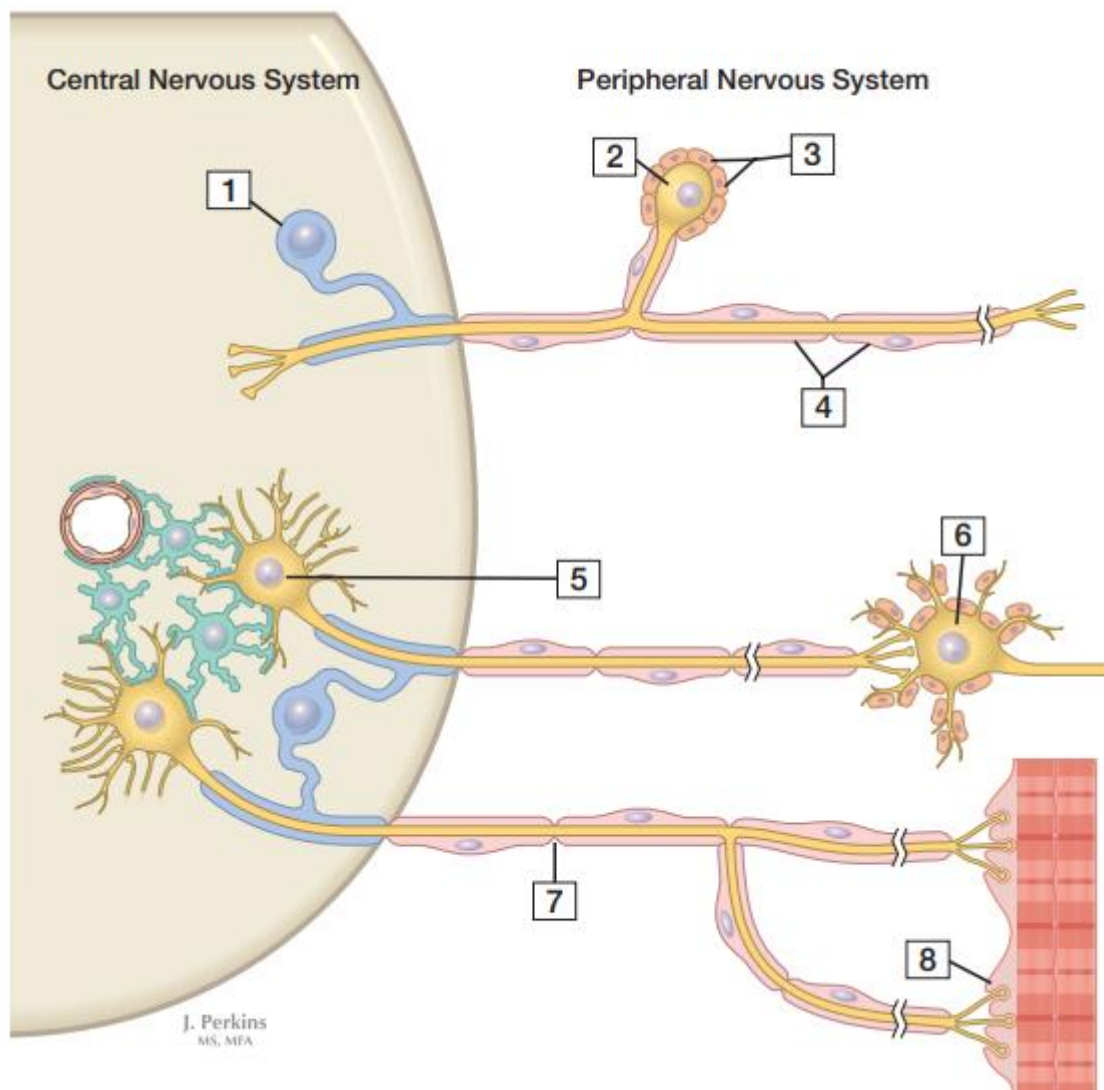


Figure 1

9. Given in the figure below, area labeled as 5 is?

d. Primary sensory (ganglion) cell body hi

10. Given in the figure below, area labeled as 6 is?

a. Postganglionic autonomic neuron

11. In the figure 1 shown above, label the following numbers;

2: Neuron cell body.

3: Glial cell.

4: Schwann cell.

7: Node of Ranvier

8: Neuromuscular junction.

Answer the following questions. Add diagrams/ pictures if needed.

Each question carries 5 marks.

1. Osman, a 23 years old boy suffered a traumatic brain injury on the right sided orbital lobe. Which side and which half of the retinal fields sensory input would be lost ? Reason why ?

Ans: Case Answer: In this case right side was injured so left side of both eyes visual ability was lost.

Reason: Homonymous hemianopsia or Homonymous hemianopia is hemianopic visual field loss on the same side of both eyes. Homonymous hemianopsia occurs because the right half of brain has visual pathway for the left hemi field of both eyes, and the left half of the brain has visual pathway for the right hemi field of both eyes. When one of these pathway is damaged the corresponding visual field is lost.

2. What are the differences between spinal nerves and cranial nerves?

Ans: 1: Spinal Nerve:

- Nerve connected with spinal cord are called Spinal Nerve.
- There are 31 pairs of spinal nerve.
- Spinal nerve coordinates the activities associated with all the body parts below the neck.
- Spinal Nerve are named according to their location on the spinal cord.
- All the spinal nerve are mixed.

2: Cranial Nerve:

- Nerve that connected to the Brain are cranial nerve.
- In mammals there are 12 pairs of cranial nerve.
- Cranial nerve are designed by serial number and name.
- Cranial Nerve coordinates the activities associated with head and neck.
- Most of cranial nerve are mixed except of olfactory, optic and vestibulocochlear nerve.

3. What do you know about the reticular formation of spinal cord?

Ans: Reticular formation: As the name suggests it is the network of neurons and nerve fibers present in the Brain.

Location: Reticular formation is located in brain stem. It extends through out the length of the brain stem along the central axis from the spinal cord to the thalamus.

It occupies the anterior portion of the medulla, pons, midbrain, hypothalamus, thalamus.

The reticular formation is strategically placed among the important nuclei and the nerve fibers crossing the brain stem that is crucial for its various function.

Structure: The reticular formation resemble a net made up of nerve fibers and nerve cell. It is deeply placed diffuse network of fibers and nuclei. This network can be diffusely divided into three longitudinal columns. Median column, lateral column and Medial column.

- The media column occupies the median plane. It consists of the intermediate size neurons.
- The lateral column is located lateral to the median column. This column occupies mainly small neurons.
- The medial column is located medial to the median column. It mainly consists of large size neurons.

Blood supply: The blood supply of reticular formation is derived from the branches of vertebral arteries and the basilar artery. The blood supply is the same as for the part of brain stem containing the reticular formation.