



**Name : Babar Ali**

**ID: 15036**

**Department : DPT(4<sup>th</sup> Semester)**

**Subject : Anatomy**

**Instructor : Dr Arooba**

## Mid Term Assignment 2020

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?

**c. Betz cells**

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.

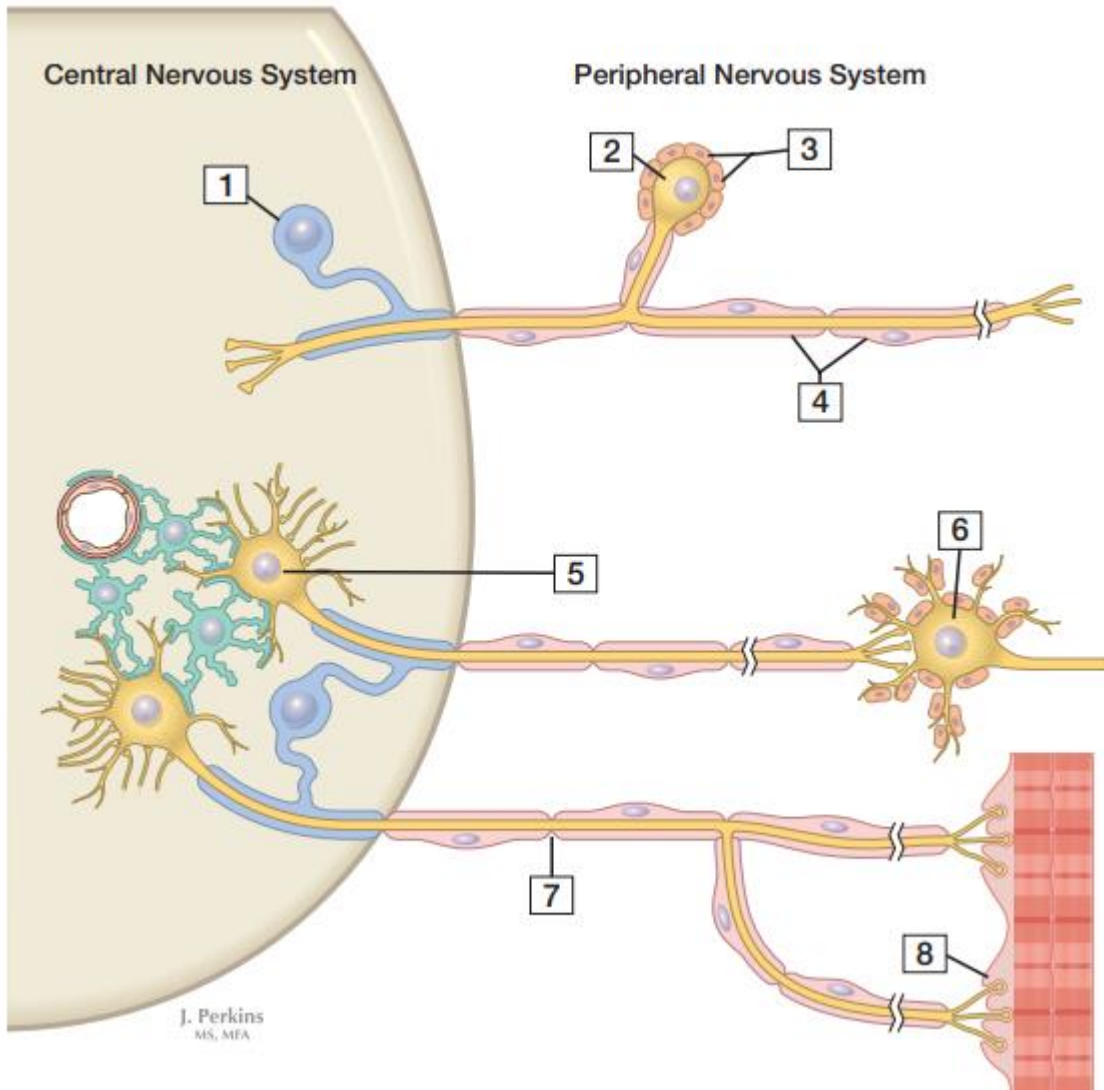


Figure 1

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 Motor and plate.

**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 field's sensory input would be lost? Reason why?**

**ANS:**

**Retinal fields Sensory lost :**

“Left sides of both eyes visual ability will be lost “

**Reason:**

Homonymous hemianopsia (or homonymous hemianopsia) is hemianopic visual field loss on the same side of both eyes. Homonymous hemianopsia occurs because the right half of the brain has visual pathways for the left hemifield of both eyes , and the left half of the brain has visual pathways for the right hemifield of both eyes . When one of these pathways is damaged the corresponding visual field is lost.

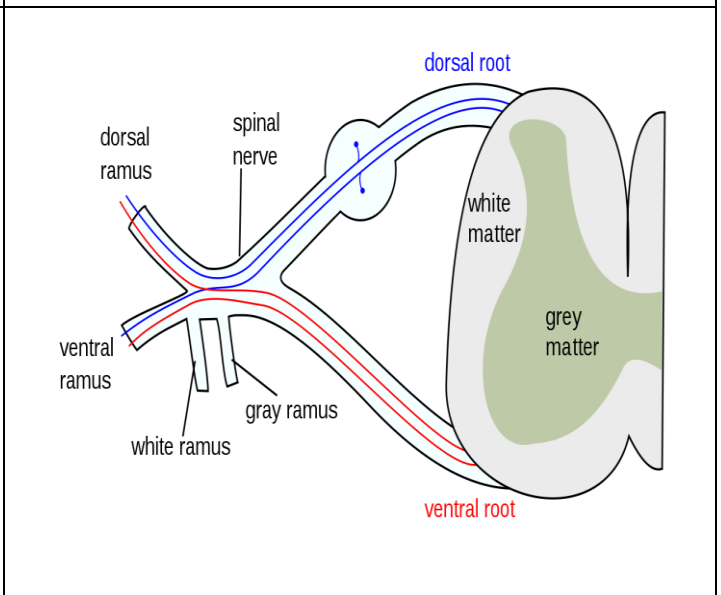
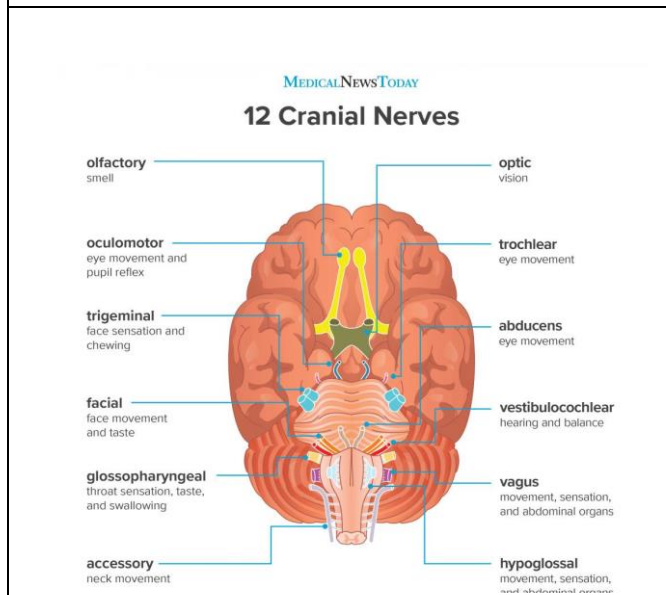
So in this case right side was injured so left side of both eyes visual ability will be lost.

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

**Answer:**

**DIFFERENCE**

<b>CRANIAL NERVE</b>	<b>SPINAL NERVES</b>
Nerves connected to the brain are cranial nerve.	Nerve connected with spinal cord are called spinal nerves.
In mammals there are 12 pairs of cranial nerves.	There are 31 pairs of spinal nerve.
Cranial nerve coordinate the activities associated with the head and neck.	Spinal nerve coordinate the activities associated with al body parts below the neck.
Most of cranial nerves are designated by serial number and names.	All the spinal nerves are mixed.
Most of cranial nerves are mixed except of olfactory, optic and vestibulocochlear nerve.	



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

**Answer:**

#### **Reticular formation:**

Reticular formation as the name suggest is the junction of neuron and nerve fiber 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 it's 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 medial 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.

