Homework

1. What is the role of CSF?

ans- Cerebrospinal fluid (CSF) is a clear, colorless, slightly alkaline fluid present in the ventricles of the brain, central canal of spinal cord and spaces between the meninges. It protects the CNS from shocks and keeps it moist.

2. How could you differentiate between medullated and non-medullated neurons?

ans-

Medullated neuron	Non-medullated neurons
* Axon is covered by myelin sheath.	* Axon is not covered by myelin sheath.
* Nodes of Ranvier are present.	* Nodes of Ranvier are absent
* Saltatory conduction of impulses.	* Normal conduction of impulses with different stages of conduction
* Found in spinal & cranial nerves.	* Found in autonomous and the somatic neural systems

3. Write any two conditions in which cerebrum and cerebellum work together.

ans * While we are talking, cerebellum brings out the muscular movements of the tongue and the cerebrum intimately decodes & interpretes our sound & language through temporal lobe.

* The cerebellum coordinates the eye movements and the cerebrum through occipital lobe decodes & interprets the visual information; shape & colour of the object. Thus, the cerebrum & cerebellum internally function under vision.

4) What is a synapse?

ans- The synapse is an area of functional contact between one neuron and another for the purpose of transferring information. Synapses are usually found between the fine terminal branches of the axon of one neuron and the dendrites or cell body of another.

* It consists of a bulbous expansion called a pre-synaptic knob lying close to the membrane of a dendrite. The cytoplasm consists of mitochondria, SER, microfilaments & numerous synaptic vesicles which contain neurotransmitter. In between the pre-synaptic knob & post-synaptic depression, a narrow fluid filled space called synaptic cleft is present.

* As the nerve impulse reaches the presynaptic knob, the synaptic vesicles get stimulated to release a chemical called neurotransmitter (eg- Acetylcholine) on the synaptic cleft. It is actually because of the calcium ions that cause the movement of the synaptic vesicles to the surface of the knob. The neurotransmitter molecules diffuse across the gap to come in contact with the chemoreceptor sites on the post-synapatic membrane of dendrites. In this way, nerve impulse passes across the minute gap (synapse) to stimulate dendrons of other neuron.