

TENDER HEART HIGH SCHOOL

BIOLOGY

CLASS X

REVISION

Urine is more concentrated in the summers as compared to the winters.

- Students tend to write answers on the basis of only sweat production.
- They don't link it to amount of water reabsorbed in the kidney tubules.
- Emphasize on how the answer needs to be presented.



Tips and suggestions

➡ Urination/ Micturition

Urination - Voiding of urine from the urinary bladder to the outside.

Micturition - Voiding of urine from the urinary bladder through the urethra by the relaxation of the sphincter muscles under the impulse from the nervous system.

➡ Site of Ultrafiltration – Glomerulus and not ~~Bowman's capsule~~

➡ Emphasize on the organ that produces urea(Liver) and the organ that eliminates urea(Kidney)

Tips and suggestions

The Nervous System

- Location/Function of Myelin Sheath and Neurolemma.

- Function.

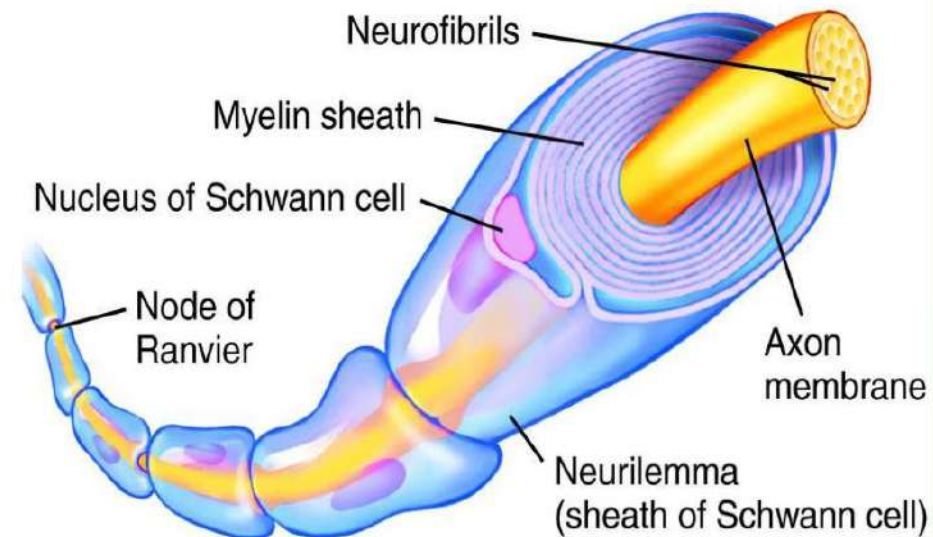
Neurilemma is involved in protecting and regenerating nerve fibers.

Myelin sheath increases the speed of the conduction of the nerve impulses through the nerve fiber.

- Location

The neurolemma is the outermost covering of nerve fibers.

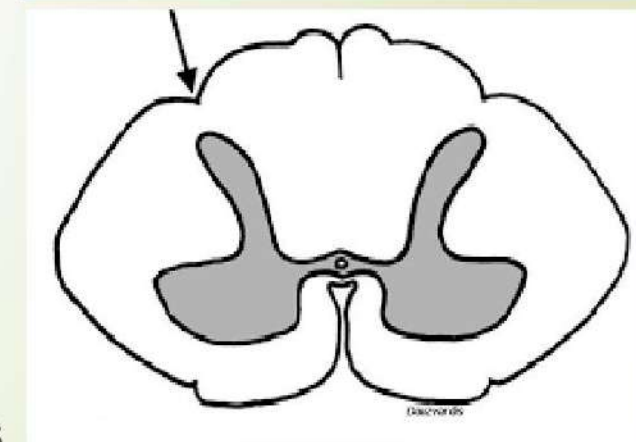
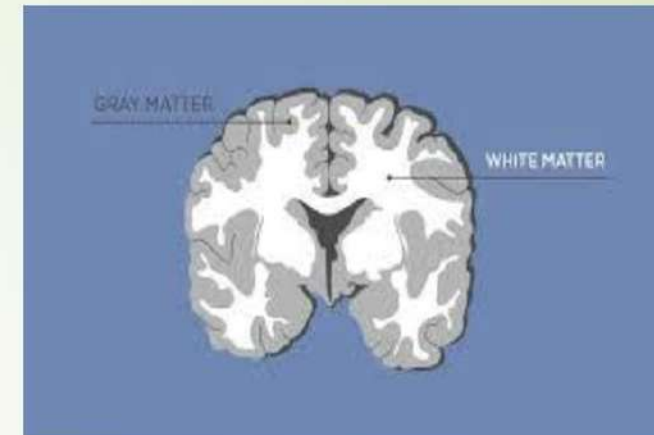
Myelin sheath is the covering around the axon of a nerve cell.



Tips and suggestions

Arrangement of matter in the Brain and Spinal Cord

- The outer portion of the Brain(cortex) contains the gray matter comprising of the cell bodies/cytons of the neurons.
- The inner portion of the Brain(medulla) contains the white matter comprising of the axons / nerve fibers of the neurons.
- The outer portion of the Spinal cord contains the white matter comprising of the axons/nerve fibers of the neurons.
- The inner portion of the Spinal cord contains the gray matter comprising of the cell bodies/ cytons of the neurons.
- **NOTE* – DO NOT USE THE TERM VICE VERSA, REVERSE**



Tips and suggestions

- Reflex Action – It is an automatic / quick / immediate, involuntary action in the body brought about by a stimulus.

Make the students learn this definition verbatim.

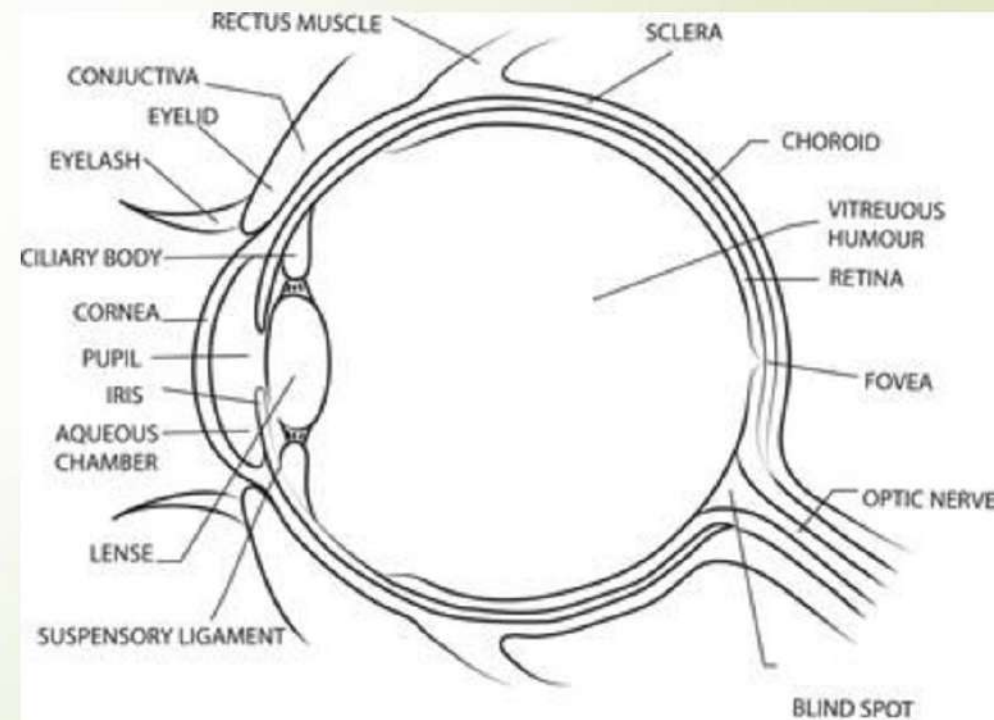
- **Dura mater / Pia mater not Duramatter / Piamatter.**
- For function of medulla oblongata not sufficient to write
 - To control the activities of the internal organs
 - Examples need to be given
 - For e.g.- peristaltic movement of the alimentary canal, beating of the heart, movement of breathing.

Tips and suggestions

Sense Organs

Instructions to draw the internal structure of Eye

- 4 lines to draw the 3 layers of the Eye.
- Spherical shape of the eyeball with a bulge in the front.
- Biconvex shape of the eye lens.
- Position of Fovea / Yellow spot to be marked.



Tips and suggestions

- ➡ Emphasize on the spelling of Rhodopsin / Iodopsin. Common error seen Rhodospin / Iodospin
- ➡ Reasons for Myopia / Hypermetropia
Eyeball is lengthened / shortened from front to back.
- ➡ Function of eustachian tube
Equalizes pressure X
Equalizes air pressure X
Equalizes air pressure on either side of the eardrum/ tympanum. ✓
- ➡ Accept only the terms Malleus, Incus and Stapes for the ear ossicles and not Hammer, Anvil and Stirrup.

Tips and suggestions

Endocrine System

- Textbook definition - Hormone is a secretion from some glandular part of the body, which is poured directly into blood and which acts on the target organs

Change it to

Hormones are chemical substances secreted by ductless glands called the **endocrine glands**, which are poured

- Pituitary gland is known as the master gland. Why?

Because it seems to control practically all other glands. **X**

Because it seems to control practically all other endocrine glands. **✓**

Tips and suggestions

- Some women develop beard, moustache and a deep male voice.

Because of the overgrowth of the adrenal cortex which leads to **increased production of the cortical hormones** leading to a condition called Adrenal Virilism.

- Location of Adrenal gland

Above the kidneys. **X**

Fitted like caps on top of each kidney. **✓**

Tips and suggestions

The Reproductive System

➡ Function of Amniotic fluid

Do not use the word baby / child / infant for embryo / fetus.

➡ Function of Placenta

Do not generalize the substances exchanged.

From and to needs to be mentioned.

e.g. Nutrients like **Glucose**, **Amino acids**, **Lipids**, **Vitamins** are diffused from the mother to the fetus.

Carbon dioxide and **Urea** diffuses from the fetus to the mother.

Tips and suggestions

➡ What is Semen ?

Semen is the mixture of sperms and the secretions of the male accessory glands. **X**

➡ Semen is the mixture of sperms and the secretions of the male accessory glands- Seminal Vesicles, Prostate gland and Cowper's gland. **✓**

➡ Gestation Period

Encourage answers – 40 weeks, 280 days

Not – 9 months.

Tips and suggestions

Population

Factors responsible for population explosion in India / World.

Reasons stated in the textbook should be adhered to.

Students should not mix the factors of the two.

e.g. Better health care will not be accepted as a correct answer for population explosion in India.

Headers need to be explained otherwise marks are not awarded.



LIST OF DIAGRAMS

- 1. Duplicated chromosome
- 2. Basic structure of a nucleotide
- 3. Stages of Mitosis
- 4. A single fully grown root hair
- 5. Plasmolyzed root hair
- 6. Plasmolyzed cell
- 7. Ganong's Potometer
- 8. Open/closed stomata
- 9. Chloroplast
- 10. Experiment to show that oxygen is evolved during photosynthesis



LIST OF DIAGRAMS

- 11. Cross section of Artery, Vein and Capillary
- 12. Heart
- 13. The human urinary system
- 14. L.S of kidney
- 15. Malpighian capsule and tubule.
- 16. Neuron
- 17. Brain
- 18. The reflex arc
- 19. External and internal structure of eye.
- 20. Short sightedness and Long sightedness and its correction



LIST OF DIAGRAMS

- **21. Ear**
- **22. Membranous Labyrinth**
- **23. Thyroid gland**
- **24. Adrenal gland**
- **25. Male reproductive system**
- **26. L.S of testis**
- **27. Female reproductive system**
- **28. Sperm/ male gamete**
- **29. Ovum / female gamete**
- **30. Tubectomy & Vasectomy**