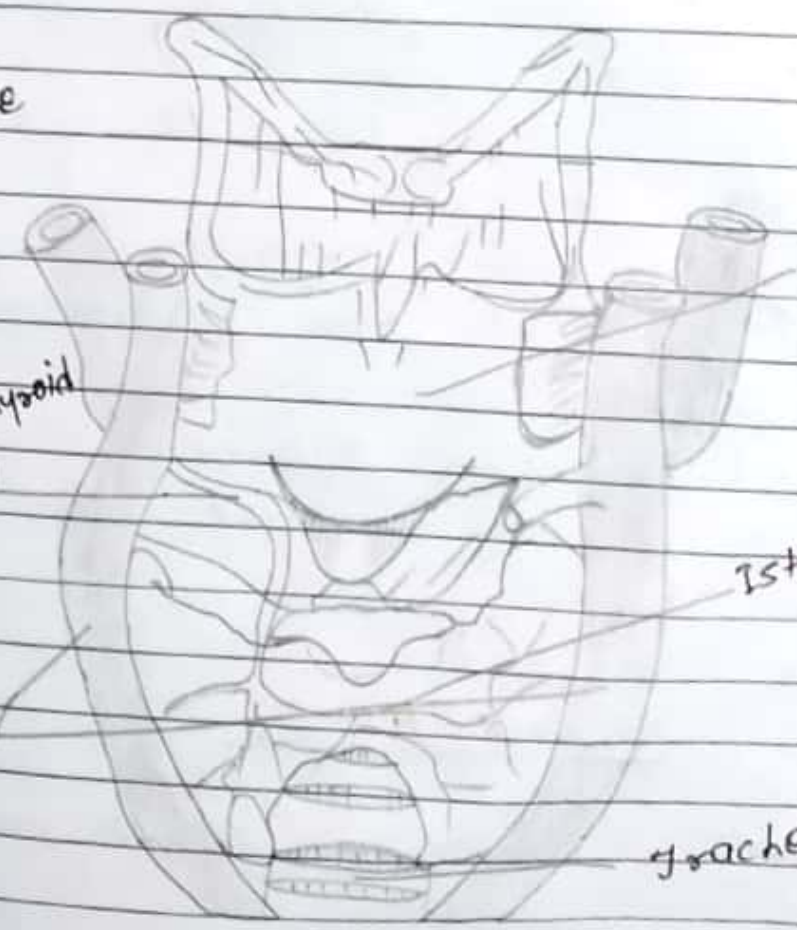
Dr. Rajesh Verma. Assistant professor and Head. U.G. Department of Zoology. D.K. College Dumraon (Buxar). Notes for Bsc part 3rd, paper V.

Q. :- Write notes on THYROID GLAND.

Ans:- **Thyroid :-**

The thyroid or thyroid gland, is an endocrine gland in the neck consisting of two connected lobes. The lower two thirds of the lobes are connected by a thin band of tissue called the thyroid isthmus. The thyroid is located at the front of the neak, below the Adam's apple. Microscopically, the functional unit of the thyroid gland is the spherical thyroid follicle, lined with follicular cells (thyrocytes), and occasional parafollicular cells that surround a lumen containing colloid. The thyroid gland secretes three hormones: two thyroid hormones - triiodothyronine (T_3) and thyroxine (T_4) -

and a peptide hormone, calcitonin. The thyroid hormones influence the metabolic rate and protein synthesis, and in children, growth and development. Calcitonin plays a role in calcium homeostasis. Secretion of the two thyroid hormones is regulated by thyroid-stimulating hormone (TSH), which is secreted from the anterior pituitary gland. TSH is regulated by thyrotropin releasing hormone (TRH), which is produced by the hypothalamus.



Thyroid

Details

Pronunciation	/ˈθaɪrɔɪd/
Precursor	Thyroid diverticulum an extension of endoderm into 2nd pharyngeal arch
System	Endocrine system
Artery	superior, inferior thyroid arteries
Vein	Superior, middle, inferior thyroid veins

Identifiers

Latin	Glandula thyreoidea

MeSH D013961

TA A11.8.00.001

FMA 9603

The thyroid gland develops in the floor of the pharynx at the base of the tongue at 3-4 weeks gestation; it then descends in front of the pharyngeal gut, and ultimately over the next few weeks, it migrates to the base of the neck. During migration, the thyroid remains connected to the tongue by a narrow canal, the thyroglossal duct. At the end of the fifth week the thyroglossal duct degenerates, and over the following two weeks the detached thyroid migrates to its final position.

History :-

Antiquity :-

The presence and diseases of the thyroid have

been noted and treated for thousands of years. In 1600 BCE burnt sponge and seaweed (which contain iodine) were used within China for the the treatment of goitres, a practice which has developed in many parts of the world. In Ayurvedic medicine, the book Sushruta Samhita written about 1400 BCE described hypothyroidism, hypothyroidism and goitre. Aristotle and Xenophon in fifth century BCE describe cases of diffuse toxic goitre. Hippocrates and Plato in the fourth century BCE provided some of the first descriptions of the gland itself, proposing its function as a salivary gland. Pliny the Elder in the first century BCE referred to epidemics of goitre in the Alps and proposed treatment with burnt seaweed. a practice also referred to by Galen in the second century, referred to burnt sponge for the treatment of goitre.