Date EXP NO. Eccrutory system :-Eccretory organ is neural gland Consists of peripheral tuleules -> Executory calls are nephrocytes i.e. xanthine and wrate particles - Pass through the lumen of neural gland its ducts. Some finally discharge into the peribranchial gone of pharynx through the aperture.

Nerwous sys Simple & degenerated Includes neuve ganglion (brain lies just below the Neuveal gland: Simple Brain onsists Bi Mull Nerve - It control pady re Teacher's Signature ÷.,





Neural Complex

Three structures : (i) the neural gland, (ii) nerve ganglion or brain, and (iii) the dorsal tubercle are collectively referred to as neural complex (Fig. 26).

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Fig. 26. Herdmania. Neural complex.

Sense Organs

Special sensory organs are lacking. However, several simple structures in the form of isolated or aggregated cells, with nerve endings represent the receptors (Fig. 27).

1. Tangoreceptors. Sensitive to touch, these cells are scattered throughout non-vascular areas of test along margins of siphons, over tentacles and covering vascular ampullae.

2. Photoreceptors. Sensitive to light, these are pigmented cells (ocelli) containing red pigment granules, located on the margins of siphons and vascular ampullae.

 Rheoreceptors. Sensitive to water currents, these cells line the apical margins of siphons.

4. Thermoreceptors. Sensitive to temperature, these cells line the siphons.

 Chaemoreceptors. Sensitive to chemicals, these include the tentacles and the dorsal tubercle.





(a) Tentacles. The branchial tentacles due to their rich nerve supply are considered olfactory in nature. They test the quality of incoming water and also the size of food particles entering the pharynx.

(b) Dorsal tubercle. It is a small sensory structure suspended mid-dorsally in the prebranchial zone, just anterior to the junction of peripharyngeal bands and dorsal lamina. It consists of two conical, spirally coiled projections or lobes, each carrying a similarly coiled and ciliated, narrow open channel running from its base to the tip. Both the channels are continuous at the broad, convex, dome-like base of the dorsal tubercle. The surface of dorsal tubercle is covered by ciliated columnar epithelium, rich in nerve supply. The dorsal tubercle serves to smell and taste the water entering the pharynx, thus functioning both as an olfactory and a gustatory receptor.