

B.SC - Semester 2

(Core course – Theory)

Course Code – 1ZOOTC0201

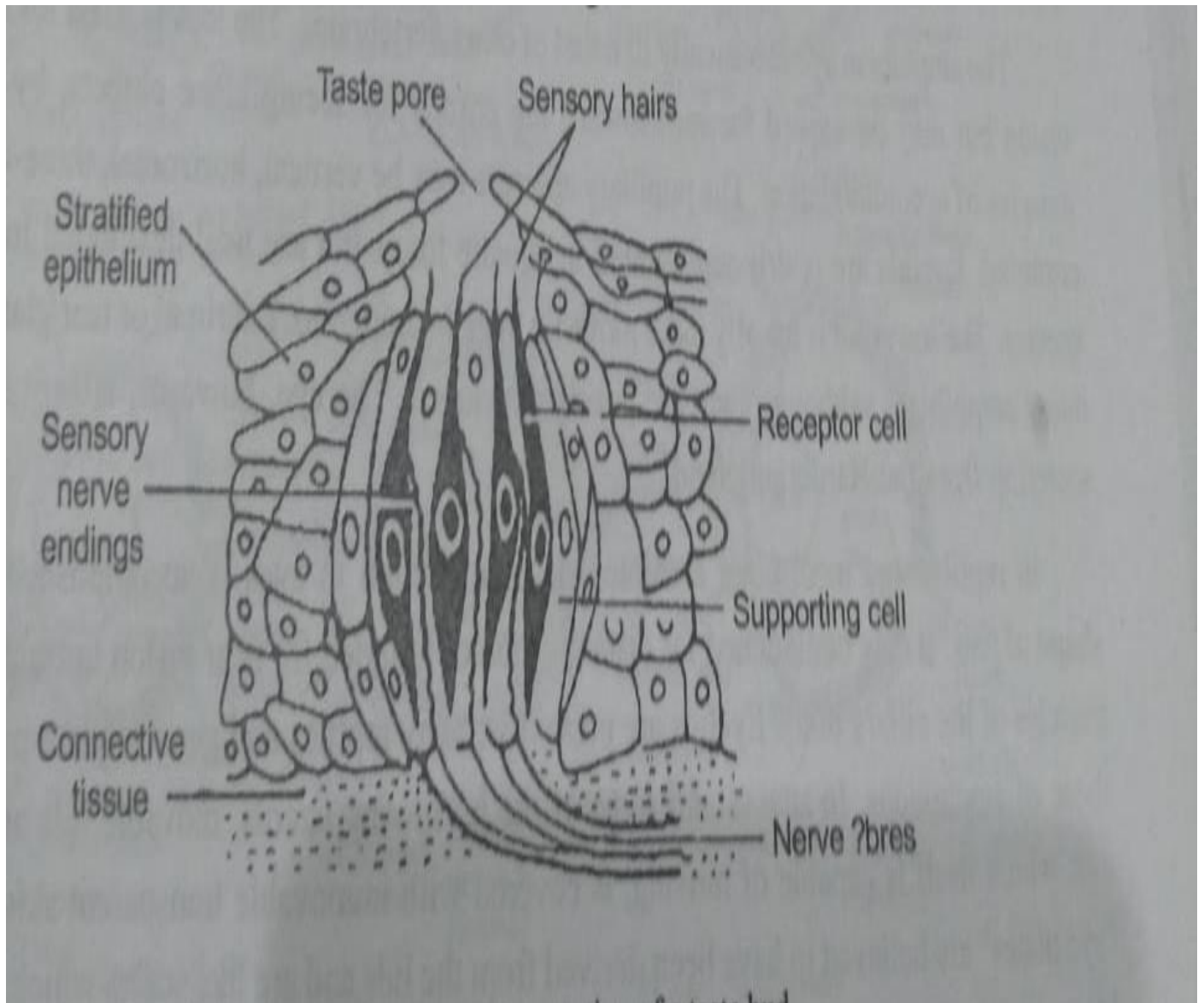
Course Title - Comparative anatomy and developmental biology of vertebrates

UNIT: 4

Topic: Gustatoreceptors (Organs of Taste)

The organ of taste are called gustatoreceptors these organs consist of taste buds which perceive the sense of taste from the dissolved substances. Their structure is fairly uniform in vertebrates. Each taste buds consist of cluster of neurosensory cells and supporting cells which are arranged to form a barrel like str. Embedded in stratified epithelium each sensory cell is long and narrow with a thin taste hair at free tip and a sensory nerve fiber at its base.

Taste hair project into a depression or a taste pore through which the fluid from the oral cavity get access to sense cell in mammals , in other they are projected above the surface there are being no taste pore . The sensory cell surrounded by supporting cell .The supporting cell have the same shape as in taste cell but lack hair and nerve ending.



Diagrammatic representation of taste buds

In man there are four fundamental sensation of taste that is sweet, bitter and sour. Taste buds are widely distributed in fishes because they live a liquid medium being found in the mouth. Pharynx and other surface of the head in some fishes they occur on the entire body surface including even in fins. Taste buds are supplied by v, vii,ix,and X cranial nerves. In amphibian the taste buds are restricted to the roof of the mouth the tongue and mucosa that lines in the jaws .In most reptiles the taste buds are restricted largely to the pharyngeal region taste buds are lacking on the tongue of most birds are though they are found in lining of mouth and pharynx. In mammals there are various kinds of Papillae on the tongue which posses taste buds .no of taste buds on papillae are varies from animal to animal .e.g.

Cows = 1760

Sheep = 48

Pig = 4760

In some cases the sensation of taste in reality due to sense of smell. e.g. during bad cold when access to olfactory organ in the nose become difficult, the food appear tasteless.