

Quadrant II – Transcript and Related Materials

Programme : Bachelor of Science (second year)

Subject : Zoology

Paper Code : ZOC 103

Paper Title : Anatomy of Animal Body Systems

Unit : 01

Module Name : Dermal Derivatives – Part I

Module No : 12

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Notes:

Derivatives which are derived from the dermis are called as Dermal derivatives. These include scales of extinct fishes, cartilaginous fishes and bony fishes.

Scales are mesodermal in origin and are found in fishes, some reptiles and few mammals. There are five different types of scales

- **Cosmoid**
- **Ganoid**
- **Placoid**
- **Cycloid**
- **Ctenoid**

Cosmoid Scale: They are present in primitive Choanichthyes.

Ganoid Scale: They are found in early primitive fishes. There are two types of ganoid scale.

1. **Paleoniscoid**
2. **Lepisosteoid**

Placoid scale: These scales are like the vertebrate teeth as they have the same form and structure. These scales are found in cartilaginous fishes. The teeth in shark are enlarged placoid scales. The hardest substance in the body is enamel and the hardened outer layer is vitrodentine.