

Topic: Islets of Langerhans
Class: B.Sc Part -III (Hons.)
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Group - B

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Location and Structure of Pancreas:

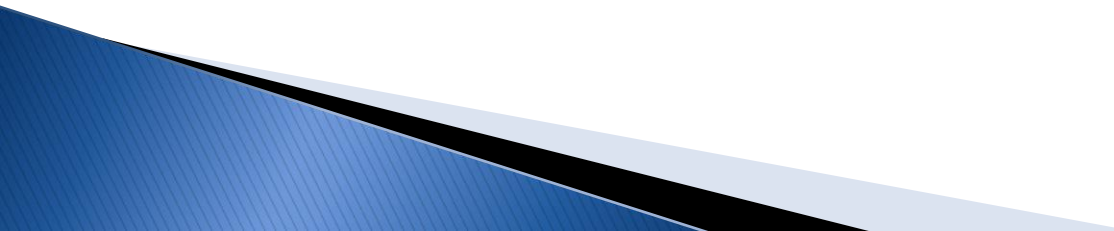
- ▶ **Origin of Pancreas:**
- ▶ It is derived from the endoderm of the embryo.
- ▶ The pancreas lies inferior to the stomach in a bend of the duodenum.
- ▶ It is both an exocrine and an endocrine gland.
- ▶ A large pancreatic duct runs through the gland, carrying enzymes and other exocrine digestive secretions from the pancreatic acinar cells to the small intestine.
- ▶ The tissue of the pancreas has in addition to the acinar cells, groups of cells called islets of Langerhans, after the name of their discoverer (1869).
- ▶ These produce endocrine secretions

Four kinds of cells have been identified in the islets:

- ▶ (i) Alpha cells (about 15%) produce glucagon. Alpha cells are also called A-cells.
- ▶ (ii) Beta cells (about 65%) produce insulin. Beta cells are also called B-cells.
- ▶ (iii) Delta cells or D-cells (about 5%) produce somatostatin (SS), and
- ▶ (iv) Pancreatic Polypeptide cells or PP cells or F-cells (15%), produce pancreatic polypeptide (PP).

Pancreas



- ▶ Beta cells are usually found towards
 - ▶ The middle of the islet,
 - ▶ The alpha cells towards the periphery of the islet
 - ▶ And Delta (D) and F-cells are found scattered.
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Pancreas

