Glandular System

Glandular System :

Glands are Group of cells / tissue which becomes secretive in function.

It may secret Hormone, Enzyme or both.

1. Exocrine glands

(i) These are ducted glands

(ii) They secret enzymes in large amount.

(iii) They are proteinaceous in biochemical nature except Ribozyme (formed of RNA).

(iv) They act as bio-catalyst but are never used.

$$\text{starch} \xrightarrow[\text{Ptyalin}]{} \text{Maltose.}$$

2. Endocrine glands

(i) Harmones are secreted in low amount by them.

(ii) These are secreting harmones directly into blood.

(iii) Biochemical nature :

- Protein - Somatotropin - Main Growth Harmone. (By Pitutary gland)
  - Thyroxine - (Thyroid gland)
- Steroids
  - Testosterone (♂)
  - Estrogen (♀)

(iv) Mechanism of action :

Biocatalyst but is used in biochemical reactions.

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3. Heterocrine / Mixed gland:

(i) They have Exocrine cells secreting enzymes & also endocrine cells screting harmones.

(ii) e.g. Pancreas
Testis (♂)
Ovary (♀)

Hepatic cells - liver
Hepatology - study in Liver

Q. Which of the following is not Endocrine gland?

(a) Liver
(b) Thymus
(c) Ceruminous gland
(d) Lacrinal gland. - tear gland
(e) Sweat gland
(f) Mammary gland.
(g) Adrinal gland.

Ear-wax gland / Ceruminous gland
- To prevent pathogen entry in ear
- wax to entrap pathogen

Liver:

(i) Hepatology is study of liver.
(ii) Liver has max. no. of mitochondria per cell.
(iii) It has power of regeneration.
(iv) 30-40% of total absorption of small intenstine goes to Liver and it performs excretory function (i.e. removes toxic component)
(v) Ornithine cycle occurs in Liver responsible for Urea formation.
(vi) During Joundice & Hoepatitis Liver becomes affected and becomes unable to remove toxic components, bile components.

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