Stomach (Histologically)

- Cardiac
  - Serosa
  - M.E
  - Sub M.
  - Mucosa.
- Fundus/Body
  - Short gastric pit (epithelium).
  - long Gastric gland. (Lamina propria).
- Pyloric
  - long gastric pit (epi)
  - Short Pyloric gl. (Lamina propria)

Cells →
- Mucous Neck Cell → Mucous
- Parietal / Oxyntic → HCl, Intr. fact
- Peptic / Chief cells → Pepsinogen
- EnteroEndocrine cells (Ex:- G-cell). → Gastrin, Secretin, Histamine
- Adult Stem cell. → Regeneration

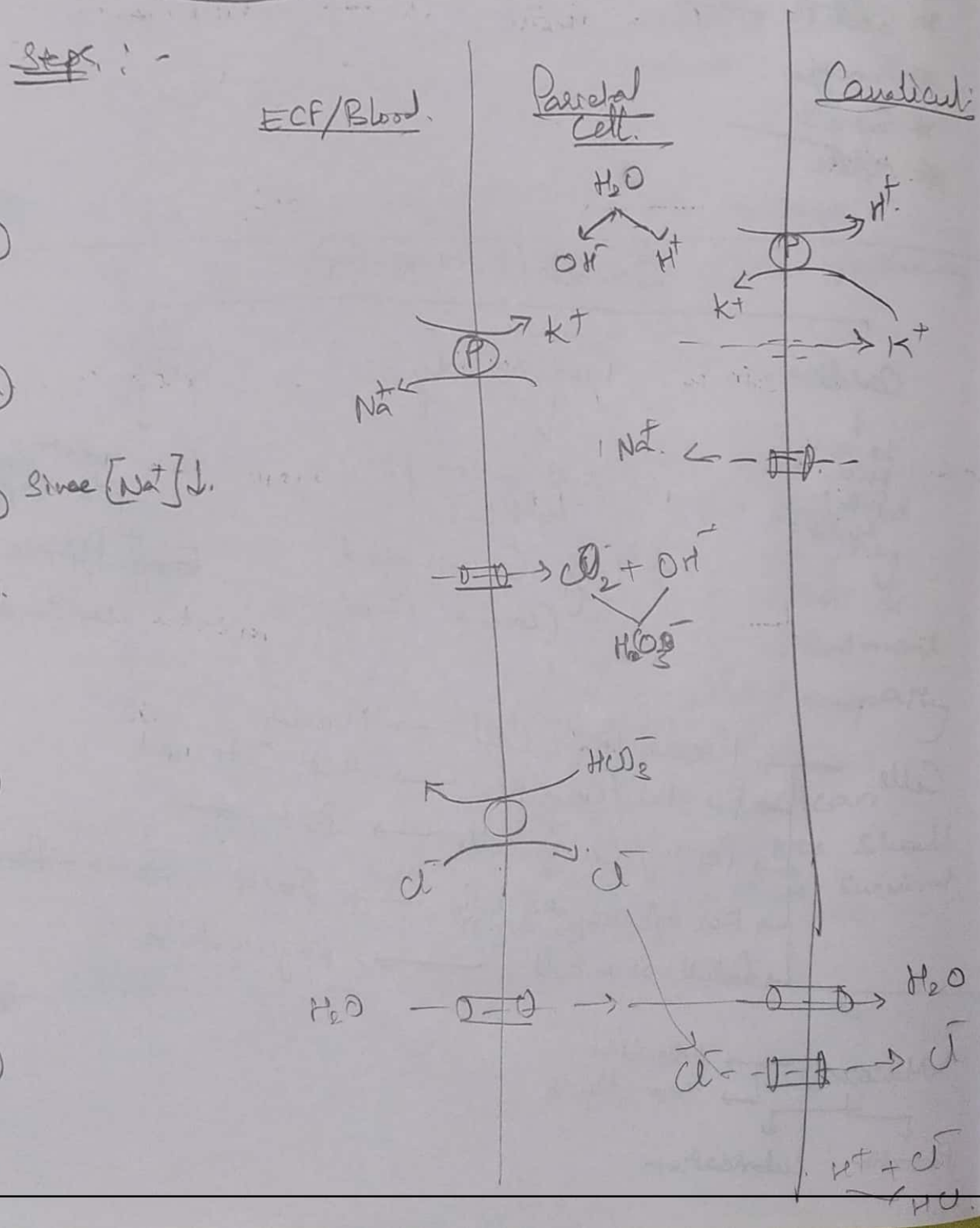
Mucous →
- Alkaline
- 1mm thick.

→ Protection, Lubrication.

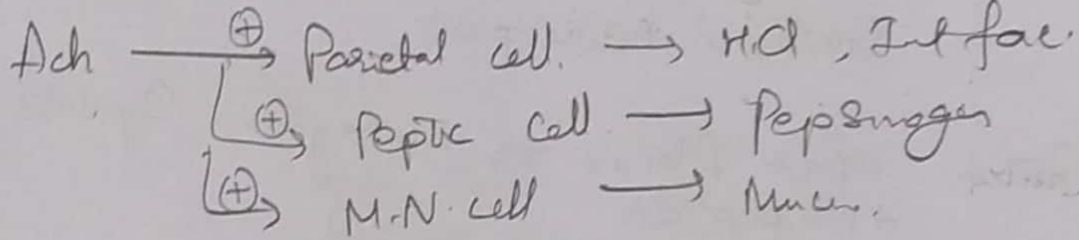
1500 cal. for 1L

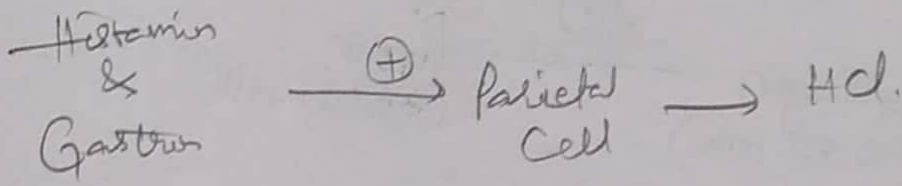
Parietal cell

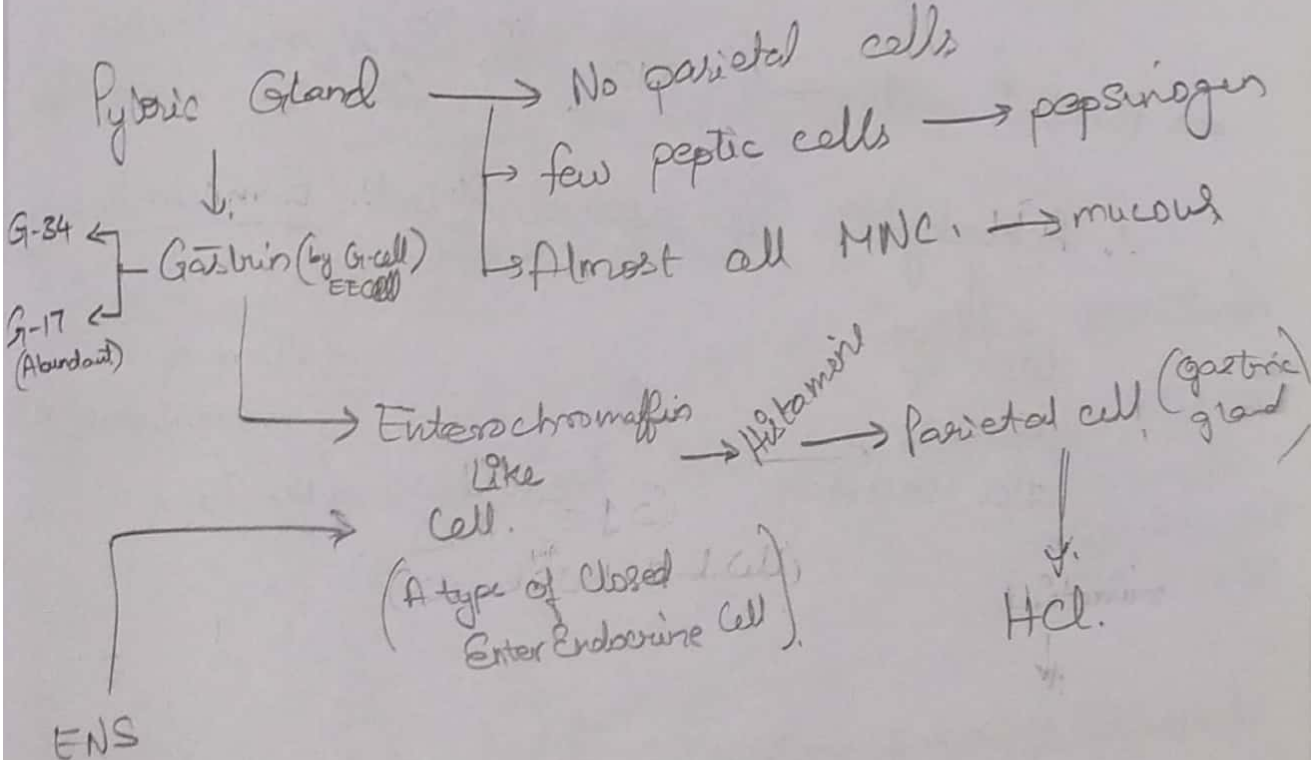
Steps :-



leakage of HCl.







last 4Aa — last 8 Aa — All Aa.

Functional, Active part

Gastrin 4Aa + Alanine ⇒ pentagastrin (Synthetic gastrin)
+ polypeptide.

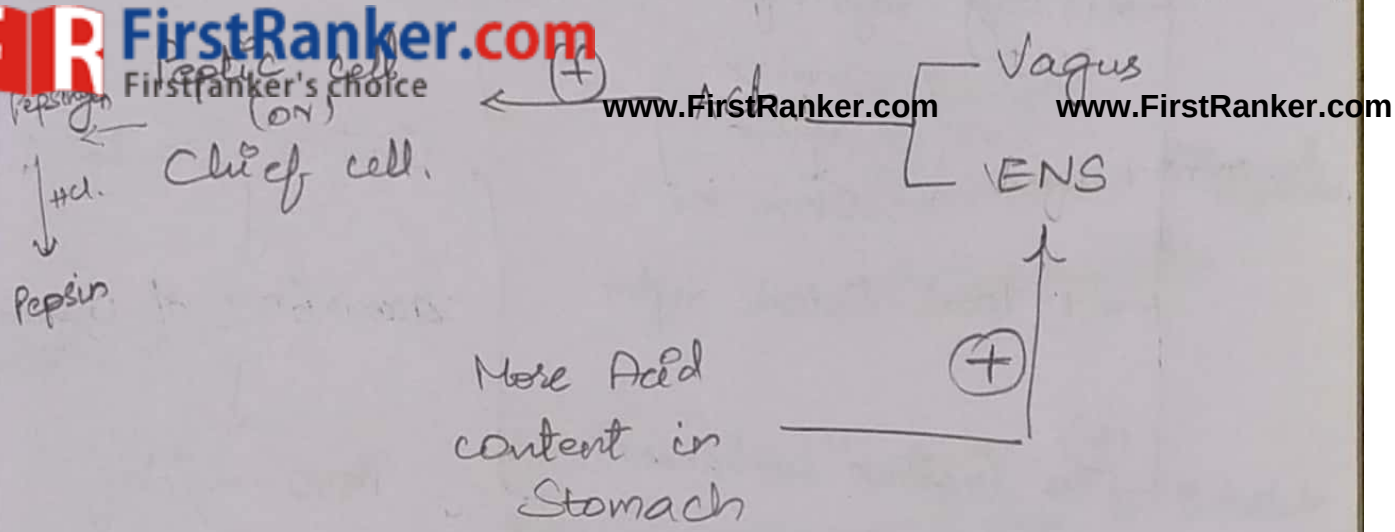
Pepsinogen (42,500 GMW) —HCl.→ Pepsin (35,000 GMW)

⇒ Parietal cells → HCl & Intrinsic factor (for B_{12} absorbtion)

∴ Achlorhydria is associated with pernicious anemia

Achlorhydria ↓ lack of stomach HCl secretion

pernicious ↓ failure of maturation of RBC (No B_{12}).



∴ If Gastric HCl secretion ↓.
Pepsinogen secretion also ↓.

Phases of Gastric Secretion :-

(1) Cephalic Phase → 30% of Gastric secretion
↳ Even before food enter Stomach.
- sight
- smell
- Thought
- Taste.

(1) Cerebral cortex.
(2) Amygdala.
(3) Hypothalamus
→ Dorsal Nucleus of Vagus → Vagus → Stomach.

Brain
↓
Stomach

→ (ii) local Enteric reflex.

→ (iii) The Gastrin mechanism

Gastric secretion ↑
↓
accounts 60% of Gastric secretion (1)
↓
1500 ml/day

(2)

(3) Intestinal Phase → food at Intestine (mainly duodenum)
↓
duodenal mucosa
↓
Small amt. of Gastrin → Accounts for remaining 10% of Gastric Secretion

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Gastric Secretion during inter digestive periods → very few ml. → No Acid
→ very little pepsinogen
→ Mostly mucous

Emotional Stimulus → Food/wt. → More acid
→ More pepsinogen
→ less mucous.

∴ Emotional Stimulus → Peptic ulcer

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By.

1. Intrinsic control.
   (Myentric plexus)
2. Extrinsic control
   (Sympathetic (or) Para-Sympathetic.)