Spec ref: 4.5.3.2

KEY FACTS

- Pancreas monitors blood glucose and releases hormones
- High blood glucose → beta cells release INSULIN → cells take up glucose → liver stores as GLYCOGEN
- Low blood glucose → alpha cells release GLUCAGON → liver converts glycogen → glucose
- This is NEGATIVE FEEDBACK: response opposes the change to restore set point
- Type 1: autoimmune, no insulin → injections. Type 2: insulin resistance → diet/exercise

★ Glycogenesis: glucose → glycogen. Glycogenolysis: glycogen → glucose

KEY TERMS

Insulin	Lowers blood glucose — from pancreatic beta cells — triggers glycogen storage
Glucagon	Raises blood glucose — from alpha cells — triggers glycogen breakdown
Glycogen	Storage form of glucose — insoluble polysaccharide in liver/muscles
Negative feedback	Response opposes change — restores normal blood glucose level

■ EXAM TIP: Insulin LOWERS (stores as glycogen). Glucagon RAISES (breaks down glycogen). Glucagon ≠ glycogen. Opposite effects, tested together.