Gastrointestinal Pathophysiology (HST-121)

Laboratory Assignment #4

(Due Monday November 28th)

NAME:

Recommended reading:
1. Lecture notes on pancreatic physiology and pancreatitis

Additional optional reading:

Fill in the blanks:

- Centroacinar and intralobular duct cells secrete ____________ and ____________.
- Interlobular and main duct cells secrete ____________ and ____________.
- Acetylcholine acts through ____________ as the second messenger and stimulates secretion by the ____________ cells.
- Secretin acts through ____________ as the second messenger and stimulates ductal ____________ secretion.
- ____________ inhibits CCK and secretin release.
- Pancreatic trypsinogen is converted to trypsin in the duodenum by the action of ____________.
- ____________ and ____________ are the two leading causes of acute pancreatitis.
- Ranson's criteria for prognosis of acute pancreatitis at admission include:
  1. Age > ________ years
  2. ________ > 200 mg/dl
  3. AST > ________ U/L
  4. WBC > ________
  5. ________ > 350 IU/L
**Case 1:**

The microscopic slide GI-14 is from an emergency operation on a 52-year-old alcoholic man who presented with a precipitous drop in hematocrit, shock, and markedly elevated amylase and lipase. What is the most appropriate description for this slide?

- Acute pancreatitis
- Chronic pancreatitis
- Acute hemorrhagic pancreatitis superimposed on chronic pancreatitis
- Pancreatic adenocarcinoma

**Case 2:**

The microscopic slide GI-15 is from an elective operation (to relieve back pain) on a 48-year-old alcoholic man who has had bouts of steatorrhea and back pain for many years. What is the most appropriate description for this slide?

- Acute pancreatitis
- Chronic pancreatitis
- Acute hemorrhagic pancreatitis superimposed on chronic pancreatitis
- Pancreatic adenocarcinoma

**Case 3:**

The microscopic slide GI-16 is from a pancreatic resection in a 54-year-old man with weight loss and abdominal pain. What is the most appropriate description for this slide?

- Acute pancreatitis
- Chronic pancreatitis
- Acute hemorrhagic pancreatitis superimposed on chronic pancreatitis
- Pancreatic adenocarcinoma

**Case 4:**

The microscopic slide GI-17 is from a cholecystectomy specimen in a 46-year-old woman with chronic right upper quadrant pain. Are there any Rochitansky-Aschoff sinuses in this gallbladder?