# CONTROL AND MEASURING DEVICES

Program issues for midterm I, II

Title of the discipline: "Digestive and endocrine systems are normal"

Discipline code: NDES 2208

EP name: 6B10115 "Medicine"

Amount of study hours/credits: 120 hours/4 credits

Course and semester of study: 2nd year, 3rd semester

# ONTÚSTIK QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ Department of Morphophysiology Control and measuring devices SOUTH KAZAKHSTAN MEDICAL ACADEMY AO «Южно-Казахстанская медицинская академия» 42/11 Page 2 from 8



# Questions for border control - I,II

## **№**1

The patient complains of general weakness, abdominal pain (in the epigastric region), which manifests itself when hungry, loss of appetite, belching sour or rotten with bad breath. It is known from his medical history that he suffers from chronic gastritis. The skin is clean and pale. The tongue is covered with a white coating, the papillae are flattened.

# **Questions:**

Anatomy: Topography, structure of the stomach.

Histology: Describe the glands of the stomach.

Physiology: Secretory activity of the stomach. The composition and properties of gastric juice.

### No2

The patient is registered with a gastroenterologist with a diagnosis of cirrhosis of the liver. In a biochemical blood test: the concentration of total bilirubin is 49.2 mmol/l, albumin is 36 g/l, and the prothrombin index is 78%. It was found that the patient does not have ascites and hepatic encephalopathy.

# **Questions:**

Anatomy: The anatomical structure of the liver.

Histology: Describe the lobule of the liver.

Physiology: Liver barrier function. Bile, its composition and its role in digestion

## Nº3

The patient is registered with an endocrinologist with a diagnosis of type 1 diabetes mellitus. The meal period is often skipped due to the busy schedule of school activities and physical exercises. He was repeatedly admitted to a hospital with a hypoglycemia clinic.

# Questions:

Anatomy: Blood circulation and innervation, topography and structure of the pancreas.

Histology: Components of the pancreas.

Physiology: Composition and properties of pancreatic juice. Secretory activity of the pancreas.

## Nº4

The patient went to the doctor complaining of heartburn, belching, nausea and bad breath. He was diagnosed with chronic gastritis (inflammation of the gastric mucosa). Which lining of the stomach wall is affected by gastritis?

Questions

Anatomy: layers of the stomach wall, relation to the peritoneum Physiology: Digestion in the small intestine, intestinal secretion. Histology: Describe the histopreparation of the small intestine

## No5

A tongue operation is planned for the patient, during which the surgeon must ligate the artery supplying blood to the tongue.

# **Questions:**

Anatomy: The structure, muscles, and blood supply of the tongue.

Physiology: Salivation, composition and properties of saliva. Regulation of

salivation.

Histology: Histological characteristics of the tongue section

#### Nº6

The patient was urgently taken to the surgical department with signs of gastric bleeding. The examination revealed a deep bleeding ulcer on the small curvature of the stomach. From which vessels of the stomach did the bleeding occur?

Questions

Anatomy: blood supply to the stomach Physiology: Phases of gastric secretion.

Histology: Describe the fundal gland of the stomach

#### No7

Patient was taken to the surgical department with intense pain in the right iliac region. After the examination, the diagnosis was made: acute appendicitis. Which part of the intestine is affected?

# Questions

Anatomy: Describe the venous outflow, blood supply, topography, and structure of the damaged organ

Physiology: Explain the process of digestion in the large intestine.

Histology: Describe the histopreparation of the colon.

#### №8

Upon examination of the patient, the neurologist revealed a difficult extension of the tongue, which is associated with a malfunction of one of the pairs of his skeletal muscles.

**Questions** 

Anatomy: Describe the structure of the tongue. Name the muscles of the tongue.

Physiology: Chewing. The act of swallowing.

Histology: Describe the micro-preparation of the tongue

#### No9

A 15-year-old girl complains of general weakness, abdominal pain (in the epigastric region), which manifest when the child is hungry, loss of appetite, belching sour or rotten with bad breath. It is known from the medical history that the girl suffers from chronic gastritis. The skin is clean and pale. The tongue is covered with a white coating, the papillae are flattened.

# **Questions:**

Anatomy: Topography, structure of the stomach.

Histology: The histological structure of the stomach layers.

Physiology: Basic digestive processes.

#### **№**10

A 16-year-old girl is registered with a gastroenterologist with a diagnosis of cirrhosis of the liver. In a biochemical blood test: the concentration of total bilirubin is 49.2 mmol/l, albumin is 36 g/l, and the prothrombin index is 78%. It was found that the patient does not have ascites and hepatic encephalopathy.

# **Questions:**

Anatomy: The anatomical structure of the liver.

Histology: The functional unit of the liver.

Physiology: Liver barrier function.

#### No 11

The child is 13 years old. He is registered with an endocrinologist with a diagnosis of type 1 diabetes mellitus. The child is engaged in sports. The meal period is often skipped due to the busy schedule of school activities and physical exercises. He was repeatedly admitted to a hospital with a hypoglycemia clinic.

# **Questions:**

Anatomy: Blood circulation and innervation of the pancreas.

Histology: Components of the pancreas.

Physiology: Endocrine and exocrine systems of the pancreas.

## Nº12

A tongue operation is planned for the patient, during which the surgeon must ligate the artery supplying blood to the tongue.

Anatomy: Describe the main artery supplying blood to the tongue.

Physiology: Digestion in the oral cavity

Histology: Histological characteristics of the tongue section

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#### Nº13

The patient went to the doctor complaining of heartburn, belching, nausea and bad breath. He was diagnosed with chronic gastritis (inflammation of the gastric mucosa).

Anatomy: Which lining of the stomach wall is affected by gastritis?

Physiology: Functional characteristics of the stomach

Histology: Histological characteristics of gastric membranes

## Nº14

A tongue operation is planned for the patient, during which the surgeon must ligate the artery supplying blood to the tongue.

Anatomy: Describe the main artery supplying blood to the tongue.

Physiology: Digestion in the oral cavity

Histology: Histological characteristics of the tongue section

#### Nº15

The patient was urgently taken to the surgical department with signs of gastric bleeding. The examination revealed a deep bleeding ulcer on the small curvature of the stomach.

Anatomy: From which vessels of the stomach did the bleeding occur? Physiology: Explain the process of digestion of food in the stomach.

Histology: Diagnose the micro-preparation of the stomach.

## Nº16

The patient was taken to the surgical department with intense pain in the right iliac region. After the examination, the diagnosis was made: acute appendicitis.

Anatomy: Which part of the intestine is affected?

Physiology: Explain the process of digestion in the large intestine.

Histology: Diagnose the micro-preparation of the colon. (Name the cells...)

# **№**17

Upon examination of the patient, the neurologist revealed a difficult extension of the tongue, which is associated with a malfunction of one of the pairs of his skeletal muscles.

Anatomy: Describe the structure of the tongue. Name the muscles of the tongue.

Physiology: The function of language

Histology: Describe the micro-preparation of the tongue

# **№**18

The doctor performs an X-ray contrast examination of the stomach in two patients and evaluates the motor function of the organ. In one patient, it is elevated, which is expressed in the presence

of rapid peristaltic waves. Another patient showed decreased organ tone.

Anatomy: What anatomical structures

of the stomach wall ensure the motility of the organ (tone and peristalsis)?

Physiology: Function of the stomach

Histology: Describe the micro-preparation of the stomach

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