

Lab 1 Topics: Digestive Anatomy

Station 1: ORAL CAVITY

References: *Lab Manual, Exercise 33, p. 182, and complete Fig. 33.1;*
Workbook, complete #3, p. 241;
Textbook, p. 669-670, p. 675-676.

- Q1A. Which letter on the model identifies the oral cavity? How does the oral cavity differ from the oral vestibule?
- Q1B. Which letter identifies masses of lymphoid tissue located laterally in the oral cavity? Name them. Color them red on Fig. 14-2, p. 241, of your workbook.
- Q2A. Which letter identifies the part of the soft palate that projects downward into the oral cavity? Name it. Color it blue on Fig. 14-2 of your workbook.
- Q2B. Which letter identifies the bony structure that separates the oral and nasal cavities and forms the roof of the mouth? Name it. Color it yellow on Fig. 14-2, of your workbook.

Turn in p. 241 with your lab report.

Station 2: TEETH

References: *Lab Manual, pp. 182-183, and complete Fig. 33.2;*
Workbook, p. 248, #11, & p. 249, #12;
Textbook, pp. 670-672.

Observe the model of the complete set of teeth to answer the following questions:

- Q3A. Identify this type of tooth. Color it green on Fig. 14-2, p. 241 in your workbook.
- Q3B. Identify this type of tooth. Color it orange on Fig. 14-2, p. 241 in your workbook.
- Q4A. Identify this type of tooth. Color it purple on Fig. 14-2, p. 241 in your workbook.
- Q4B. Identify this type of tooth. Color it pink on Fig. 14-2, p. 241 in your workbook.

Turn in p. 241 with your lab report.

Observe the tooth model to answer the following questions:

- Q5A. Which letter identifies the root? What is found in the root canal?
- Q5B. Which letter identifies the substance that forms the chewing surface of the crown? Name it.
- Q6A. Which letter identifies the substance that is very like cancellous bone and forms the interior of the tooth? Name it.
- Q6B. Which letter identifies the part of the tooth that contains loose connective tissue, blood vessels, lymph vessels and nerves? Name it.
- Q7A. What is the purpose of cementum?
- Q7B. What structure penetrates the bone and holds the tooth firmly in place?

Station 3: TONGUE AND SALIVARY GLANDS

References: *Lab Manual, pp. 183-185, complete Fig. 33.3 & 33.4;*
Workbook, complete p. 241, #4;
Textbook, p. 669 and p. 672-674.

- Q8A. Which letter identifies the salivary gland that secretes mainly mucin (mucus)? Name it.
- Q8B. Which letter identifies the salivary gland that secretes serous fluid with some mucus? Name it.
- Q9A. Which letter identifies the salivary gland that secretes serous fluid rich in amylase? Name it.
- Q9B. What is the specific function of salivary amylase?
- Q10A. Which letter identifies the location of sensory receptors? Name them.

Station 4: STOMACH

References: *Lab Manual, p. 185, complete Fig. 33.5, p. 185;*
Workbook, complete p. 244, #6 and p. 245,
Textbook, p. 678-684.

- Q10B. What is secreted by the stomach and mixed with food to form chyme? What three major secretions form it?
- Q11A. Which letter identifies the structure that marks the entrance to the stomach? Name it. Color it orange on Fig. 14-3, p. 245, in your workbook.
- Q11B. Which letter identifies the area of the stomach that is primarily used for storage? Name it. Color it purple on Fig. 14-3, p. 245 in your workbook.
- Q12A. Which letter identifies the structures that allow the stomach to extend? Name them. Color some of them green on Fig. 14-3, p. 245 in your workbook.
- Q12B. Observe the direction of the muscle fibers, and identify this layer of the muscularis. In what area of the stomach is it labeled? Color this area yellow on Fig. 14-3, p. 245.
- Q13A. Name the main digestive enzyme secreted by the stomach. What other digestive secretion of the stomach activates it? Color the cells that secrete the digestive enzyme blue on the B part of Fig. 14-3, p. 245.
- Q13B. What duodenal hormone increases stomach secretions? Color the area of the stomach that empties into the duodenum pink on Fig. 14-3, p. 245 and label it.

Station 5: SMALL INTESTINE, LIVER, AND PANCREAS

References: *Lab Manual, pp. 186;*
Workbook, p. 248, #10 & p. 252, #16;
Textbook, p. 684-701.

- Q14A. Which letter on the model identifies the gall bladder? Name the hormone that stimulates the gall bladder to contract and release bile.
- Q14B. Which letter on the model identifies the pancreatic duct? What effect does the hormone in Q14A have on the contents of pancreatic juice?
- Q15A. Which letter on the model identifies the location of bicarbonate ion production? Name it.
- Q15B. Which letter identifies the part of the alimentary canal that receives secretions from the liver and pancreas? Name it.
- Q16A. Which letters identify the two ducts that merge to form the structure that empties into the alimentary canal? Name them.
- Q16B. Name two functions of the liver which are essential to life. (There are many more than two; you choose the two that YOU think are most important.)

Station 6: LARGE INTESTINE

References: *Lab Manual, p. 186;*
Workbook, p. 253, #19;
Textbook, p. 701-704.

- Q17A. Which letter identifies the most proximal portion of the large intestine? Name it.
- Q17B. Which letter identifies the most distal portion of the large intestine? Name it.
- Q18A. Which letter identifies the longitudinal muscle fibers that extend the full length of the colon? Name them.
- Q18B. Which letter identifies a pouch created by the fibers in Q18A? Name it.
- Q19A. Which letter identifies a muscular structure that connects the small intestine and large intestine? Name it.
- Q19B. Which letter identifies the longest and most movable part of the large intestine? Name it.
- Q20A. What is the primary substance absorbed by the large intestine?
- Q20B. Which letter identifies a sphincter in the large intestine that is under voluntary control? Name it.

Q21: Clinical Application Thought Question. (Answer at the bottom of your answer sheet.)
What type of acid-alkaline disorder is likely to develop if the stomach contents are lost repeatedly by vomiting over a prolonged period? What acid-alkaline disorder is likely to develop as a result of prolonged diarrhea?

Turn in p. 241 and 245 with your lab report.