Digestive Syst. H.W

Multiple Choice

Identify the choice that best completes the statement or answers the question.

 1.	Which of the following is involved in mechanic	cal c	ligestion?
	a. Amylase	c.	Pepsin
	b. Teeth	d.	Saliva
 2.	What is amylase used to break down?		
	a. Lipids	c.	Proteins
	b. Starches	d.	Vitamins
3.	What covers the opening of the respiratory trac	t to	prevent food from entering the lungs?
	a. Epiglottis	c.	Tonsils
	b. Tongue	d.	Mucus
 4.	Where does food move right after passing through	ıgh	the stomach?
	a. Esophagus	с.	Large intestine
	b. Pancreas	d.	Small intestine
5.	Where is bile stored?		
	a. Liver	c.	Gallbladder
	b. Pancreas	d.	Stomach
6.	What are organic substances needed in small or	lant	ities to maintain growth and metabolism called?
	a. Proteins	с.	Minerals
	b. Vitamins	d.	Fats
7.	Food is moved through the digestive tract through	igh :	a series of involuntary muscular contractions called
	a. mechanical digestion	с.	peristalsis
	b. chemical digestion	d.	stimuli
8.	What controls the release of food from the ston	nach	to the small intestine?
	a. villus	c.	epiglottis
	b. larynx	d.	muscular valve
9.	The first section of the small intestine is called	the	
	a. appendix	с.	duodenum
	b. rectum	d.	villus
10.	Cellulose is important in the diet as a source of		
 	a. energy	с.	fat
	b. protein	d.	fiber
11.	As a result of digestion, proteins are broken do	wn f	
	a. monosaccharides	с.	triglycerides
	b. amino acids	d.	glycerol
12.	The body's preferred energy source is		
 	a. carbohydrates	c.	proteins
	b. fats	d.	minerals
13	What is the most abundant substance in the body	lv?	
 	a. fat	с.	sugar
	b. water	d.	protein
14	Vitamins are used by the body to		•
 	a. provide energy	c.	supply building materials
	b. regulate processes in the body	d.	digest proteins
	3r		

- 15. Which of the following occurs in the large intestine as the work of anaerobic bacteria? a. absorption of water
 - b. synthesis of vitamin K and some B vitamins
 - c. change of glucose to glycogen
 - d. elimination of indigestible matter
- 16. Which of the following is part of the digestive tract?
 - c. gallbladder
 - b. small intestine d. pancreas
- _____ 17. The surface area of the small intestine is greatly increased by _____
 - a. a large number of villi c. peristalsis
 - b. chemical digestion d. mechanical digestion
- _____18. Which of the following is <u>not</u> mechanical digestion?
 - a. chewing food
 - b. contractions in small intestine
- _____ 19. Starches are large _____.

liver

a.

- a. fats
- b. proteins

- c. churning of the stomach
- d. action of pepsin on proteins
- c. complex carbohydrates
- d. simple carbohydrates



 20.	In Figure 35-1, where is bile produced?		
	a. A	c.	С
	b. B	d.	D
 21.	In Figure 35-1, where does digestion first take	plac	e?
	a. A	c.	С
	b. B	d.	D
 22.	In Figure 35-1, when does food normally cease	bei	ng liquid?
	a. A	c.	D
	b. B	d.	E
 23.	In Figure 35-1, where is stomach acid neutraliz	ed	
	a. B	c.	D
	b. C	d.	E
 24.	In Figure 35-1, which part has the lowest pH?		
	a. B	c.	D
	b. C	d.	Е



 25.	Which of the main nutrients is most represented	d in	the food groups shown in Figure 35-2?
	a. carbohydrates	c.	proteins
	b. fats	d.	vitamins
 26.	Which of the main nutrients is least represented	l in	the food groups shown in Figure 35-2?
	a. carbohydrates	c.	proteins
	b. fats	d.	vitamins
 27.	What is not easily accounted for in Figure 35-2	?	
	a. sugar	c.	proteins
	b. oils	d.	water
 28.	What type of system is shown in Figure 35-3?		
	a. reverse feedback	c.	negative feedback
	b. positive feedback	d.	anti feedback

Matching

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Match each item with the correct statement below.

a.	small intestine	h.	epiglottis
b.	liver	i.	esophagus
c.	bile	j.	target tissue
d.	thyroid gland	k.	pepsin
e.	amylase	1.	peristalsis
f.	stomach	m.	Calorie
g.	endocrine gland	n.	rectum

- _____ 29. Organ that produces bile
- _____ 30. Narrow, muscular tube in which digestion is completed
- _____ 31. Unit of heat used to measure the energy content of food
- _____ 32. Last section of the digestive system from which feces are eliminated
- _____ 33. Chemical that breaks down fats into small droplets and helps neutralize stomach acids
 - _____ 34. Digestive enzyme that begins the chemical digestion of proteins
- _____ 35. Muscular, pouchlike enlargement of the digestive tract
- _____ 36. Flap of skin that covers the opening to the windpipe during swallowing
- _____ 37. Series of involuntary muscle contractions along the walls of the digestive tract
- 38. Muscular tube that connects the mouth to the stomach
- _____ 39. Digestive enzyme that breaks down starch into sugar molecules called disaccharides

Short Answer

40. Trace the pathway of a bite of hamburger through the digestive system.

into the mouth, down the esophagus, to the stomach, to the small intestine, to the large intestine, to the rectum, and out the anus

41. What are the uses of proteins in the body?

Proteins are building materials for the body; they make up enzymes, antibodies, many hormones, and chemicals that help in clotting blood. They are also a part of muscles and many cell structures.

42. Vitamins are not broken down during the digestive process. Why is this important to a person's health?

If vitamins were broken down during digestion, they would lose their ability to function in the body.

43. Many people have their gallbladder removed, but the absence of the gallbladder has little effect on their digestion of fats. Explain why this is so.

Because bile continues to be produced in the liver and passed to the small intestine, fats can still be mechanically broken down in the small intestine without the additional bile that would be stored in the gallbladder

Problem

Although fats are an essential part of your diet, it is important to keep total fat intake at or below 30 percent of all the Calories you consume in a day. The fatty acids in fats vary in length and in the degree to which they are saturated by hydrogen atoms. Fats that are saturated are usually solid at room temperature and keep well. Most saturated fats such as those in butter, dairy products, and meats come from animal sources. However, coconut oil and palm oil are highly saturated fats from plants. A diet high in saturated fat can result in high blood cholesterol levels, which can lead to heart disease. You should limit your intake of saturated fats to no more than ten percent of your total Calories. Most of your fat Calories should come from unsaturated fats. These fats do not have all the hydrogen atoms they can carry.

Food Source (100 g)	Calories	Fat (g)	% of Calories from Fats	Saturated Fats (g)
Regular hamburger	289	21		8
Beef loin	184	7		3
Chicken breast with skin	197	8		2

Chicken breast, skinless	165	4	 1
Drumstick with skin	216	11	 3
Drumstick, skinless	172	6	 1
Bacon	576	49	 17
Ham, canned, extra lean	136	5	 2
Tuna, yellowfin	145	1	 < 1
Shrimp	99	1	 < 1
Sour cream	214	21	 13
Whole milk	61	3	 2
Low-fat milk	50	2	 1
Cottage cheese	72	1	 < 1
Cheddar cheese	403	33	 21

Table 35-1

44. Which foods listed in Table 35-1 have less than one third of their fat grams as saturated fats?

chicken breast with and without skin, drumsticks with and without skin, yellowfin tuna, and shrimp

45. If a student ate a hamburger with a slice of cheddar cheese and a glass of whole milk, how many grams of fat could the student still safely eat at the rest of his or her meals? Refer to Table 35-1.

Hamburger 21 g; cheese 33 g; whole milk 3 g = 57 g of fat consumed; female students would have 13 g left, and male students would have 36 g left.

46. A male student who consumes 2800 Calories per day should eat only 93 g of fat per day. How many fat calories is this? One gram of fat provides nine fat Calories.You may refer to Table 35-1.

837 fat Calories

47. It is recommended that a female student who regularly uses 2100 Calories per day eat only 70 g of fat per day. How many of the Calories eaten by the female student should be fat Calories? One gram of fat provides nine fat Calories. You may refer to Table 35-1.

630 fat Calories

48. Which food from Table 35-1 has the lowest percent of fat Calories?

Yellowfin tuna has the lowest, at six percent.

49. Which food from Table 35-1 has the highest percent of fat Calories to total Calories?

Sour cream, at 88 percent of the total Calories, has the highest percent.

50. Calculate the percentage of fat Calories in each food in Table 35-1. (Round answers to the nearest percent.) 1 g of fat provides 9 Calories. Notice that a hamburger contains 21 g of fat. To find the Calories from fat in the hamburger, multiply the 21 g by 9 Calories = 189 Calories from fat. Divide the Calories from fat by the total Calories in a hamburger: 189 Calories/289 Calories = 0.65 or 65 percent.

65, 34, 37, 22, 46, 31, 77, 33, 6, 9, 88, 44, 36, 13, 74

Digestive Syst. H.W Answer Section

MULTIPLE CHOICE

1. ANS: B

The process of mechanical digestion includes chewing. Teeth break apart food to expose more surface area to the actions of chemical digestion.

PTS: 1

2. ANS: B

Amylase is secreted in your mouth to break down polysaccharides, or starches.

PTS: 1

3. ANS: A

The epiglottis is a flap of cartilage that covers the opening of the respiratory tract while you swallow.

PTS: 1

4. ANS: D

After moving through the stomach, food enters the small intestine where digestion continues.

PTS: 1

5. ANS: C

Bile, used in fat digestion, is produced in the liver and stored in the gallbladder.

PTS: 1

6. ANS: B

Vitamins are organic nutrients that are required to maintain growth and metabolism. Vitamins can be found naturally in foods, or can be taken as supplements.

PTS: 1

7.	ANS:	С	PTS:	1	DIF:	В	OBJ:	35-2
	NAT:	B3 C5 G1						
8.	ANS:	D	PTS:	1	DIF:	В	OBJ:	35-2
	NAT:	B3 C5 G1						
9.	ANS:	C	PTS:	1	DIF:	В	OBJ:	35-2
	NAT:	B3 C5 G1						
10.	ANS:	D	PTS:	1	DIF:	В	OBJ:	35-1
	NAT:	C5 F1 G1				_		
11.	ANS:	B	PTS:	1	DIF:	В	OBJ:	35-3
	NAT:	C5 F1 G1	580		D IE		0.5.4	
12.	ANS:	A	PTS:	1	DIF:	В	OBJ:	35-4
10	NAI:	B6 C5 F1	DTC	1	DIE	D	ODI	25.4
13.	ANS:	\mathbf{B}	PIS:	1	DIF:	В	OBI:	35-4
14	NAT:	B0 C5 F1	DTC	1	DIE	D	ODL	25 1
14.	ANS:		P15:	1	DIF:	В	ORI:	33-4
	INAT:	DU CJ FI						

15.	ANS: B NAT: $C5 F1 G1$	PTS:	1	DIF:	В	OBJ:	35-1
16.	ANS: B	PTS:	1	DIF:	В	OBJ:	35-2
17.	NAT: B3 C5 G1 ANS: A	PTS:	1	DIF:	В	OBJ:	35-2
18.	NAT: B3 C5 G1 ANS: D	PTS:	1	DIF:	В	OBJ:	35-1
10.	NAT: C5 F1 G1	DTC	1	DIT.	D	op.	25.4
19.	ANS: C NAT: B6 C5 F1	PTS:	1	DIF:	В	OB1:	35-4
20.	ANS: B NAT: $C5 F1 G1$	PTS:	1	DIF:	В	OBJ:	35-1
21.	ANS: A	PTS:	1	DIF:	В	OBJ:	35-2
22.	ANS: D	PTS:	1	DIF:	В	OBJ:	35-2
23.	NAT: B3 C5 G1 ANS: C	PTS:	1	DIF:	А	OBJ:	35-2
24	NAT: B3 C5 G1	DTC.	1			ODL	25.0
24.	NAT: B3 C5 G1	P15:	1	DIF:	A	OBJ:	55-2
25.	ANS: A NAT: B6 C5 F1	PTS:	1	DIF:	А	OBJ:	35-4
26.	ANS: B NAT: $P6 \mid C5 \mid E1$	PTS:	1	DIF:	А	OBJ:	35-4
27.	ANS: D	PTS:	1	DIF:	А	OBJ:	35-4
28.	NAT: B6 C5 F1 ANS: C	PTS:	1	DIF:	А	OBJ:	35-7
	NAT: B3 B6 C1						

MATCHING

29.	ANS:	В	PTS:	1	DIF:	В	OBJ:	35-1
	NAT:	C5 F1 G1						
30.	ANS:	А	PTS:	1	DIF:	В	OBJ:	35-1
	NAT:	C5 F1 G1						
31.	ANS:	Μ	PTS:	1	DIF:	В	OBJ:	35-6
	NAT:	C5 C6 F1						
32.	ANS:	Ν	PTS:	1	DIF:	В	OBJ:	35-2
	NAT:	B3 C5 G1						
33.	ANS:	С	PTS:	1	DIF:	В	OBJ:	35-1
	NAT:	C5 F1 G1						
34.	ANS:	K	PTS:	1	DIF:	В	OBJ:	35-3
	NAT:	C5 F1 G1						
35.	ANS:	F	PTS:	1	DIF:	В	OBJ:	35-2
	NAT:	B3 C5 G1						
36.	ANS:	Н	PTS:	1	DIF:	В	OBJ:	35-2
	NAT:	B3 C5 G1						
37.	ANS:	L	PTS:	1	DIF:	В	OBJ:	35-1

	NAT: C5 F1 G1						
38.	ANS: I	PTS:	1	DIF:	В	OBJ:	35-2
	NAT: B3 C5 G1						
39.	ANS: E	PTS:	1	DIF:	В	OBJ:	35-3
	NAT: C5 F1 G1						

SHORT ANSWER

- 40. ANS: into the mouth, down the esophagus, to the stomach, to the small intestine, to the large intestine, to the rectum, and out the anus
 PTS: 1 DIF: A OBJ: 35-2 NAT: B3 | C5 | G1
- 41. ANS: Proteins are building materials for the body; they make up enzymes, antibodies, many hormones, and chemicals that help in clotting blood. They are also a part of muscles and many cell structures.
 PTS: 1 DIF: B OBJ: 35-8 NAT: B2 | B3 | B6
 42. ANS: If vitamins were broken down during digestion, they would lose their ability to function in the body.
 - PTS: 1 DIF: A OBJ: 35-4 NAT: B6 | C5 | F1
- 43. ANS:

Because bile continues to be produced in the liver and passed to the small intestine, fats can still be mechanically broken down in the small intestine without the additional bile that would be stored in the gallbladder.

PTS: 1 DIF: A OBJ:	35-1	NAT:	C5 F1	GI
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PROBLEM

44. ANS: chicken breast with and without skin, drumsticks with and without skin, yellowfin tuna, and shrimp

45	PTS: 1 ANS:	DIF:	В	OBJ:	35-6	NAT: C5 C6 F1
-13.	Hamburger 21 g; che and male students we	eese 33 ould ha	g; whole milk 3 ve 36 g left.	3 g = 57	g of fat consu	med; female students would have 13 g left,
46.	PTS: 1 ANS: 837 fat Calories	DIF:	В	OBJ:	35-6	NAT: C5 C6 F1
47.	PTS: 1 ANS: 630 fat Calories	DIF:	В	OBJ:	35-6	NAT: C5 C6 F1
	PTS: 1	DIF:	В	OBJ:	35-6	NAT: C5 C6 F1

48. ANS:

Yellowfin tuna has the lowest, at six percent.

49.	PTS: 1 ANS:	DIF: B	OBJ: 35-6	NAT: C5 C6 F1
	Sour cream, at 88 percent of the total Calories, has the highest percent.			
50.	PTS: 1 ANS:	DIF: B	OBJ: 35-6	NAT: C5 C6 F1
	65, 34, 37, 22, 46, 31, 77, 33, 6, 9, 88, 44, 36, 13, 74			
	PTS: 1	DIF: B	OBJ: 35-6	NAT: C5 C6 F1